

# AR



# 19

ACTIVITY  
REPORT / 2019



Bosch i Gimpera  
UNIVERSITAT DE BARCELONA

# AR



## **BOSCH I GIMPERA FOUNDATION ACTIVITY REPORT 2019**

In order to be successful,  
research must have a positive  
impact on society



**Bosch i Gimpera**  
UNIVERSITAT DE BARCELONA

As an agent of economic and social development, the University of Barcelona aims to facilitate the transfer of knowledge and R&D&I results to society, thus contributing to the competitiveness of the business sector and the improvement of social welfare.

The FBG, the UB's centre for the transfer of knowledge, technology and innovation, is responsible for promoting collaboration between universities and businesses in matters of research and innovation.

“The FBG is a structure that seeks to transform knowledge into social welfare, which in my opinion lends meaning to one of the missions of universities. Universities must be great educational institutions, they must generate new educational knowledge, and this is where the FBG comes in, making this knowledge beneficial to society, which supports universities. Thus, the exchange comes full circle.”

Josep M. Grinyó,  
Professor at the Faculty of Medicine and Health  
Sciences and Lead Researcher of the Group on  
Nephrology and Renal Transplantation of the IDIBELL  
*(excerpt from an interview conducted in October 2019)*

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**Bosch i Gimpera**  
UNIVERSITAT DE BARCELONA

## **I am pleased to present the 2019 Activity Report of the Bosch i Gimpera Foundation.**

For the past thirty-six years, the Bosch i Gimpera Foundation, the entity in charge of the University of Barcelona's third mission (the transfer of knowledge, technology and innovation), has continued to carry out its task of fostering collaboration between public and private sectors, identifying the capabilities of University researchers, and promoting R & D & I projects in collaboration with companies and institutions.

In 2019, revenues from R & D & I jointly carried out with companies and institutions amounted to EUR 29.41 million, 48% of which came from projects and 52% from grants.

Also in 2019, it is worth mentioning the fourth edition of the Fund for the Promotion of Innovation and the fifth edition of Science + Partners, which focused on Deep Tech. As for the Social Innovation Laboratory project, we have started working on a corporate image and a website, which will help to reinforce the promotional activities related to this initiative.

With regard to hired employees, we have a fairly gender-balanced staff, 44% men and 66% women, and 70% of hired personnel is research staff (postdoctoral researchers and graduates) linked to the projects managed by the FBG.

During 2019, work has continued on the improvement and re-engineering process of the Statements Website, a portal from which researchers can consult the status of their collaboration projects with companies and institutions and make requests in connection therewith. A number of improvements have been made, such as adapting it to enable online requests for hiring staff for projects and managing them, both in terms of employment contracts and grants.

Although the information below presents the activities of the year 2019, I would like to conclude by referring to the critical situation we are facing as a result of the Covid-19 pandemic. The FBG has rapidly adapted to the new situation, and has continued to support the University of Barcelona's research community through remote work in all areas. This continuity of tasks has allowed the University of Barcelona's research groups to keep signing contracts and agreements, applying for grants, preparing justifications, hiring staff, billing, receiving revenues, placing orders and making payments, applying for patents and approving the creation of new companies, among other activities.

I would like to highlight and thank the work of the FBG staff during these past months. The Foundation has provided support to various UB research groups that are developing projects related to Covid-19, so that knowledge and technology transfer can play a key role in the fight against the pandemic and bring to the fore the consequences and possible solutions to the health, economic and social crisis.

M. Carme Verdaguer  
General Manager  
Bosch i Gimpera Foundation



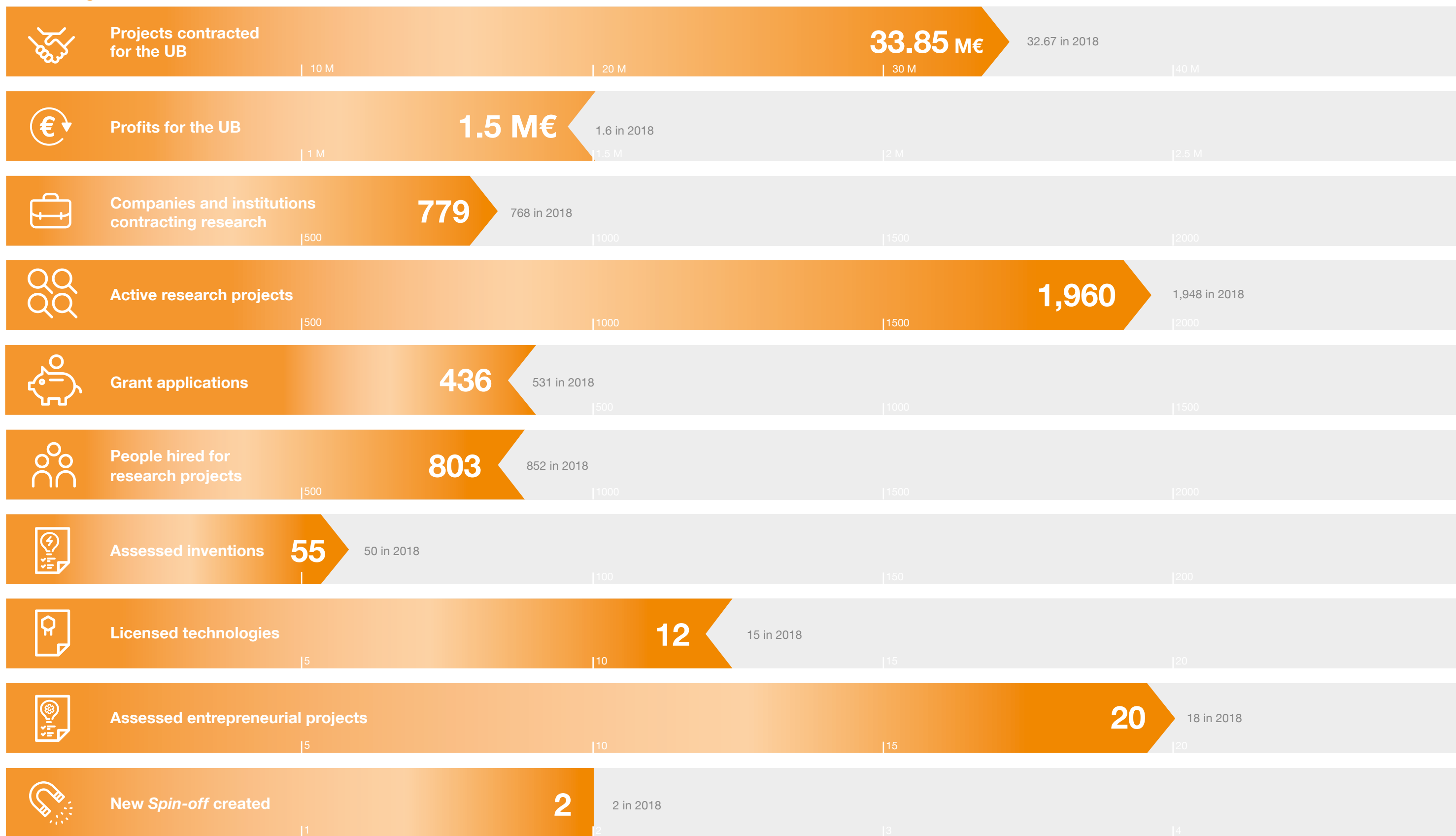
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# ACTIVITY INDICATORS

2019

Annual Figures







# INNOVATION AND KNOWLEDGE TRANSFER

“Knowledge transfer is very important. For many years we have had little connection with companies. Today, fortunately, we have the Bosch i Gimpera Foundation, which cares a lot about this and helps us find companies that may be interested in the knowledge we generate. The truth is that we always have a lot on our plate because of classes, research, and management, and it would really be very complicated for us to undertake all the work involved in knowing the business world, the issue of licenses, and patents on top of that; we would be totally overwhelmed. A support like the one that the FBG provides is very important to be able to establish contacts with the industry and with the institutions that may be interested in the knowledge that we generate and in collaborating with us in the generation of knowledge.”

Dr. Andreu Farran,  
lead researcher of the Research Group on Applied  
Nutrition of the Faculty of Pharmacy and Food Science  
(excerpt from an interview conducted in May 2019)

## CONTRACT RESEARCH

Through the hiring of researchers and research groups from the University of Barcelona, we offer companies the possibility of improving their products and services.

**News examples of the collaboration between the University and socioeconomic agents.**

### INVESTIGACIÓN CÁNCER

#### Descubren que el tabaco resta efectividad a un fármaco contra cáncer pulmón

Barcelona, 15 nov (EFE).- Una investigación llevada a cabo por científicos de la Universidad de Barcelona (UB), del Hospital Clínic y de Boehringer Ingelheim ha descubierto los mecanismos moleculares por los que pierde eficacia un medicamento para tratar el cáncer de pulmón avanzado y han comprobado que están relacionados con el consumo de tabaco.

La Vanguardia,  
15 November 2019



#### DOSIS D'ESPERANÇA ENTRE SANG I METRALLA

Reobre, museïtzat, l'antic hospital republicà de la Batalla de l'Ebre del Molar (Priorat) per mostrar les condicions de la sanitat militar durant la Guerra Civil

El País, 14 November 2019



#### Fàbriques que es netegen soles

Ikiwi i el Cemic han creat un sistema que converteix les màquines de neteja industrials en robots autònoms

L'empresa catalana de serveis de neteja i manteniment Ikiwi i el Centre d'Enginyeria de Microsistemes per a Instrumentació i Control de la Universitat de Barcelona (Cemic) han desenvolupat conjuntament un sistema que converteix les màquines de neteja industrials en robots autònoms. La solució permet automatitzar la màquina convencional per fer-la intel·ligent i que funcioni sense la intervenció d'un operari.

Per a aquest projecte d'innovació, Ikiwi i el Cemic (centre amb el segell Tecnio) han rebut un ajut de 104.000 euros en el marc del programa Innotec d'Acció –l'agència per a la competitivitat de l'empresa de la Generalitat–.

La Vanguardia sup. Dinero,  
22 September 2019

## Figures / annual / Contracted revenue



Contracts

10.52 M€

12.56 in 2018

| 10 M

| 20 M



projects

634

656 in 2018

| 500

| 1000



TECHNOLOGIES,  
MATERIALS, AND LICENCES

The UB, university leader  
in European patents

This headline coincided with the thirtieth anniversary of the first patents managed by the University of Barcelona, first through the Patent Centre and later together with the Bosch i Gimpera Foundation.

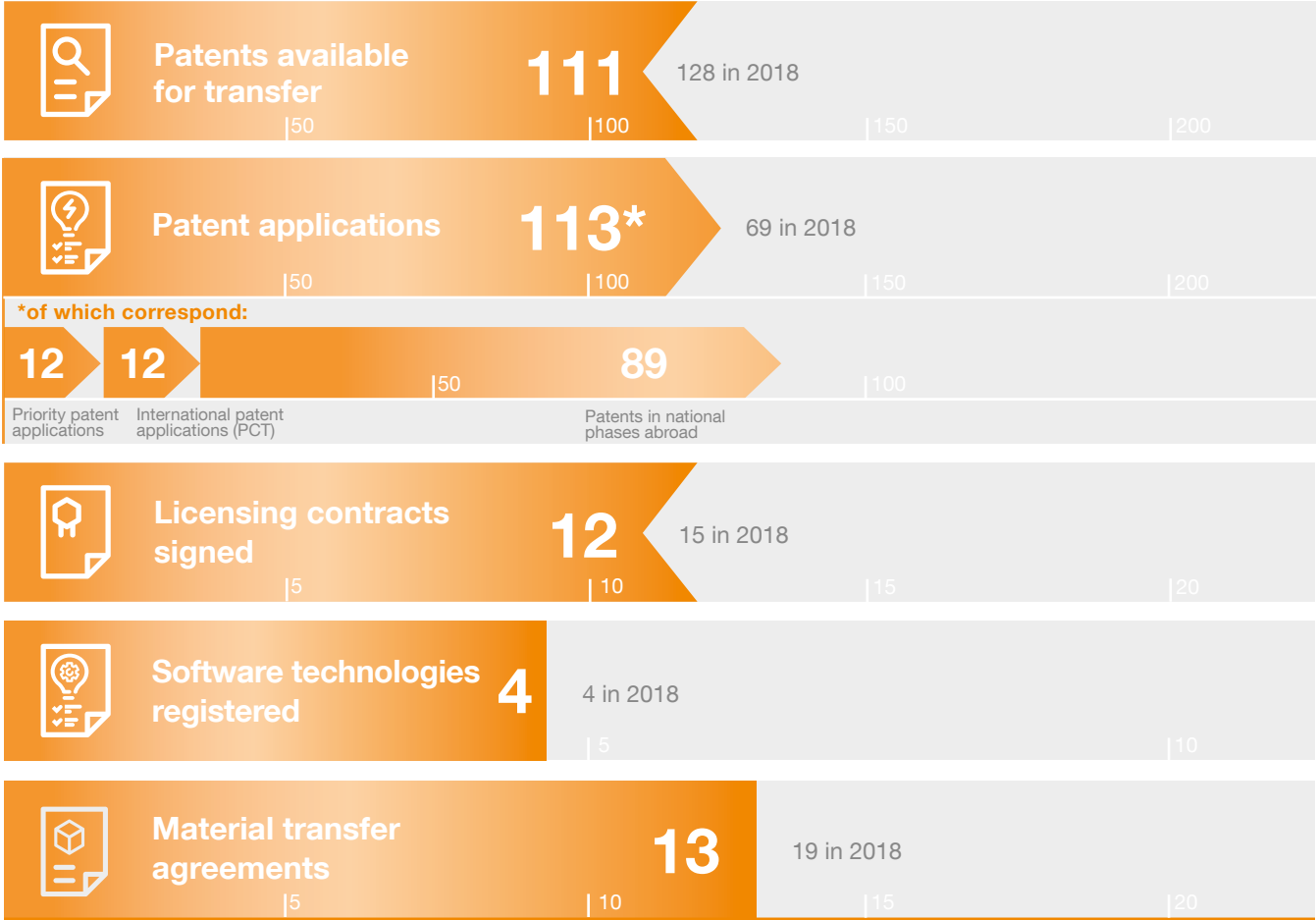
DETRÁS DE

La UB, líder universitario en patentes europeas

La Universitat de Barcelona (UB) es el centro académico español con más patentes europeas presentadas, según un informe de la Oficina Europea de Patentes (OEP) de esta semana. La institución universitaria, con 17 solicitudes el año pasado, requirió licencias para proyectos del sector químico y farmacéutico (7), electrónica y sensores (6), tecnologías de la información (3) y óptica e instrumentación (1). Fuera del ámbito universitario, sólo dos entidades superaron a la UB en número de patentes. Se trata del CSIC, con 61, y la farmacéutica Esteve, con 33.

Expansión,  
14 March 2019

Figures / annual / Technologies, materials, and licences



In 2019, the revenue generated by 2019 and previous licences was € 216,046.

BUSINESS CREATION AND  
SUPPORT FOR THE ENTREPRENEUR

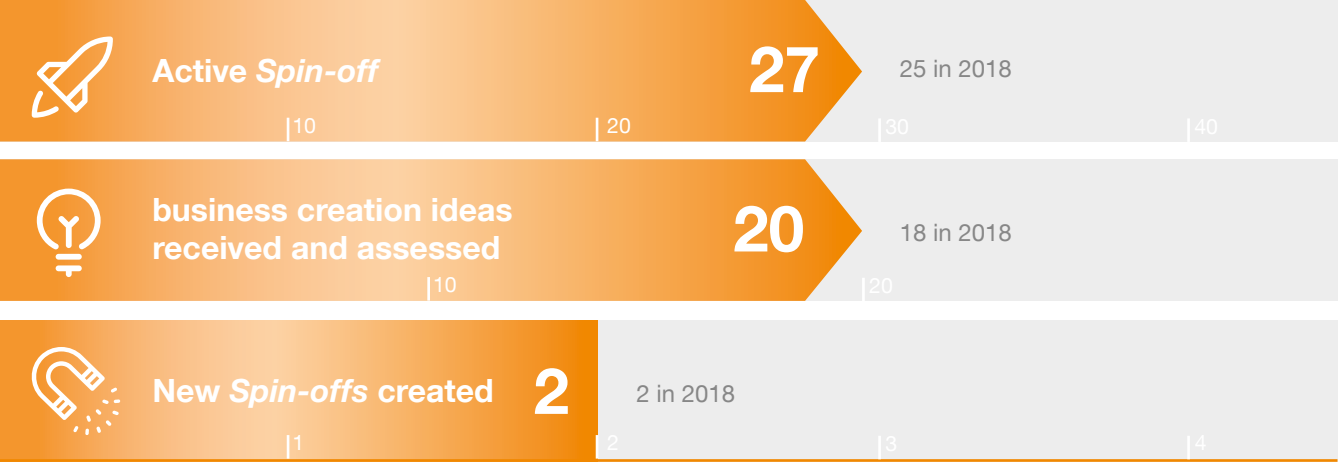
Las 'spin off' de la UB captan 3,7 millones en 2018

Las 15 'start up' procedentes de esta universidad facturaron cinco millones de euros

La Fundació Bosch i Gimpera ha impulsado la creación de más de 40 empresas

Expansión, 17 December 2019

Figures / annual / Business creation and support for the entrepreneur



Spin-off created

- Neurekalab – Development of tools to treat dyscalculia and other learning disabilities.
- Qilimanjaro Quantum Technologies – Development of a quantum computer.

Spin-off shareholdings through UB Innovative and Scientific Culture, SLU (CIC-UB)

Advanced Nanotechnologies, SL; Biocontrol Technologies, SL; Bluephage, SL; Braingaze, SL; Colorsensing, SL; Cytes Biotechnologies, SL; Dapcom-Data Services, SL; DBGen Ocular Genomics, SL; Enantia, SL; Enlighting Technologies, SL; Impetux Optics, SL; Iproteos, SL; Nostrum Biodiscovery, SL; Smalle Technologies, SL; Virtual Bodyworks, SL; Neurekalab, SL, and Qilimanjaro Quantum Technologies, SL.

Spin-off shareholding through the Bosch i Gimpera Foundation

- Bluephage, SL.

Funding obtained

- Virtual Bodyworks and Enlighting Technologies received €1.1 million in private funding.
- Impetux Optics and Virtual bodyworks won grants from the SME Instrument programme Phase 1 (€ 50,000).
- Colorsensing, Bluephage and Enlighting Technologies received Neotec grants amounting to € 250,000 each.
- Colorsensing was awarded an EIT Headstart grant.

Awards

Smalle Technologies won the first prize in the SmartCatalonia Challenge, awarded by Barcelona's Port Authority.

UB RESEARCH GROUPS AWARDED THE TECNIO CERTIFICATION

“For us, the FBG is a fundamental tool that connects university and research with society, the public administration and the corporate world. We are accredited as a TECNIO centre, and this has partly been thanks to the support of the Bosch i Gimpera Foundation.”

Neus Otero,  
Researcher of the Research Group on Applied Mineralogy, Geochemistry and Geomicrobiology (MAiMA), Faculty of Earth Sciences  
(excerpt from an interview conducted in December 2019)

This certification, granted by the Generalitat de Catalunya with the support of ACCIÓ, identifies research groups that develop differential technology for companies or facilitate its use.



- Centre for the Design and Optimization of Processes and Materials (DIOPMA).
- Centre of Microsystems Engineering for Instrumentation and Control (CEMIC).
- Centre for the Production and Validation of Advanced Therapies (CREATIO).
- Thermal Projection Centre (CPT).
- Centre for Research on Cellular and Molecular Technology (CELLTEC).
- Centre for Toxicology Research (CERETOX).
- Data Science (DS@UB).
- Applied Mineralogy and Environment (MAiMA).
- Drug Development Service (SDM).

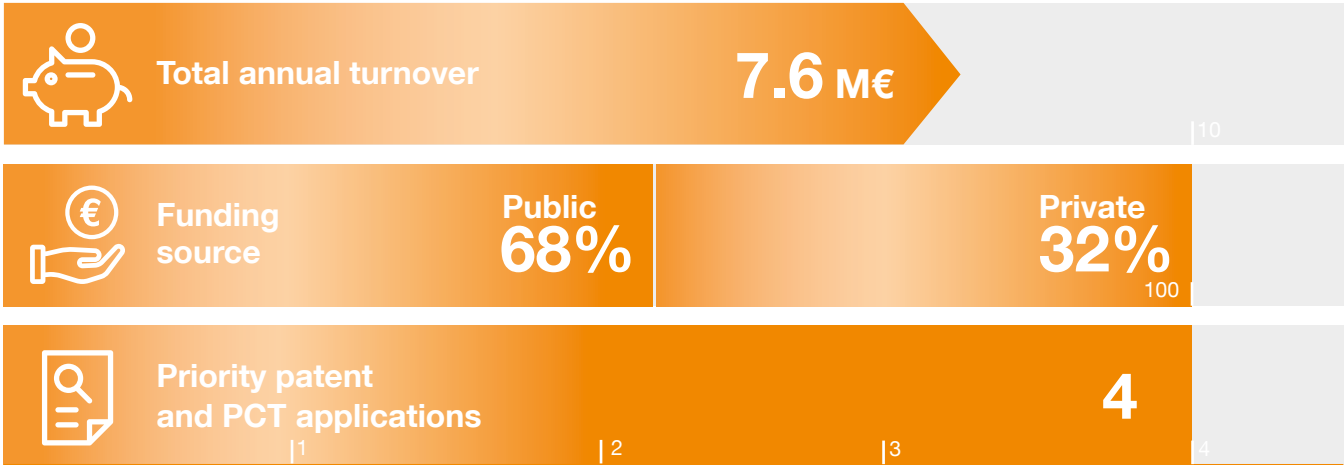


MANAGEMENT OF RESEARCH AND KNOWLEDGE TRANSFER PROJECTS

“The FBG is an essential aid for researchers. I think that a researcher should be able to have time to research, to look for new projects, but sometimes we are asked to do a lot of paperwork for which we are not prepared.

The FBG assumes all these responsibilities, which in fact would not fall to us were this a country where research was more relevant. For me and for us as a group, the FBG is fundamental, because it makes our work much easier.”

FIGURES / annual / TECNIO research

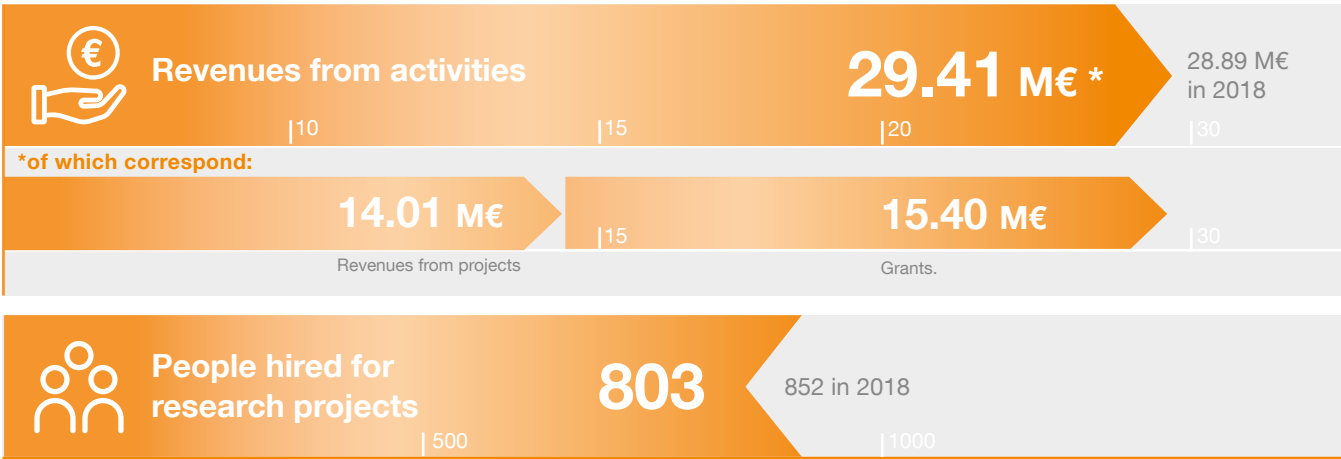


Noemí Pereda,  
lead researcher of the Child and Adolescent  
Victimization Research Group (GReVIA),  
Faculty of Psicology  
(excerpt from an interview conducted in July 2019)

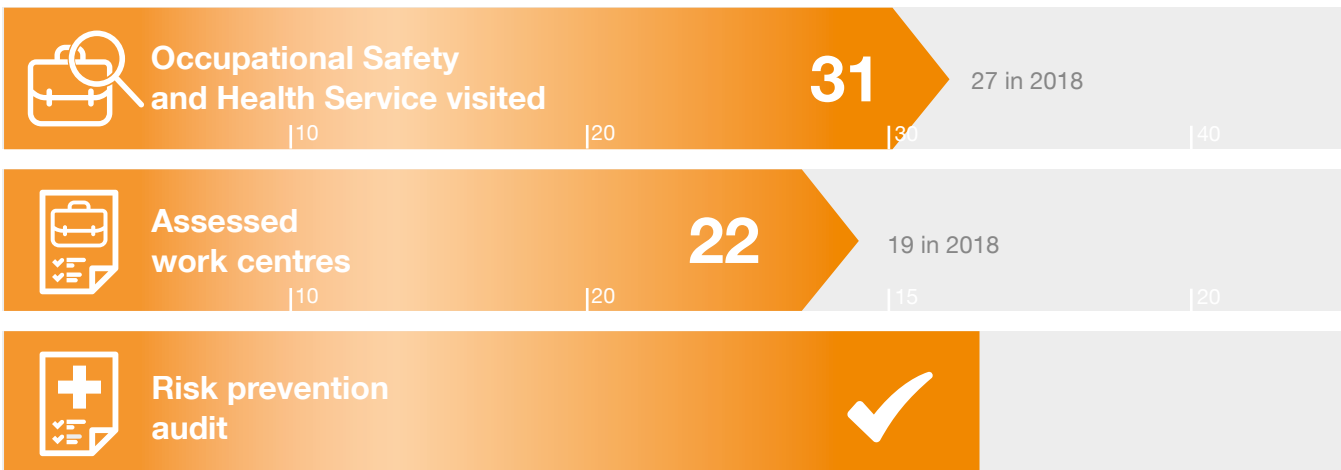
REVENUES  
FROM ACTIVITIES



FIGURES / annual / Activities



FIGURES / annual / Occupational Safety and Health Service

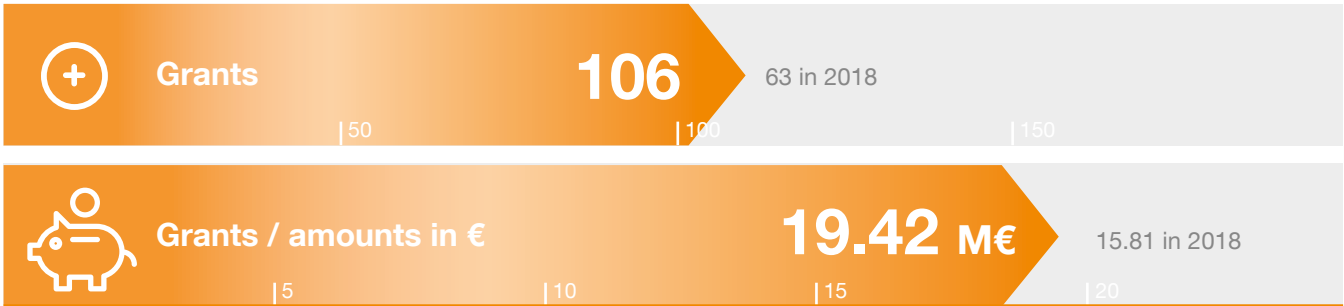


COLLABORATION  
AGREEMENTS

- **Innovative and Scientific Culture SLU**
  - Collaboration agreement with the Fund for the Promotion of Innovation (F2I).
- **Barcelona Zoo Foundation**
  - Monitoring the gorilla population in the Lossi Wildlife Sanctuary (Republic of the Congo) 15 years after the Ebola epidemic.
  - Study of the ecology and conservation biology of the giant anteater (*Myrmecophaga tridactyla*) and the maned wolf (*Chrysocyon brachyurus*) and the use of unmanned aerial systems (drones) to obtain data.
  - Monitoring the effect of climate change on the trophic niche of cetaceans and chondrichthyans in the Mediterranean.
- **Knowledge and Development Foundation**
  - Promoting research on all those activities related to the social function of higher education and, in particular, to aspects associated with the contribution of universities to development.
- **ALB, SA**
  - Research on the use of technologies in the industrial market: applicability to the case of air-conditioning installers.

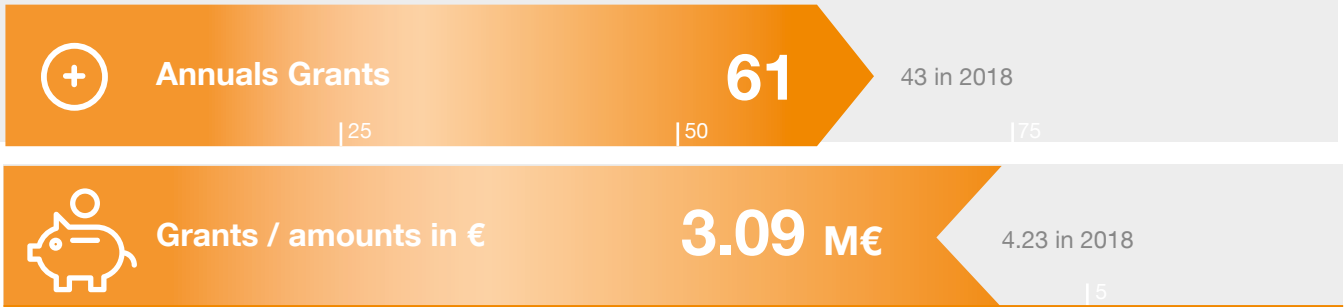
GRANTS

FIGURES / annual / Contracted revenue



PUBLIC AND PRIVATE GRANTS

FIGURES / annual / Public and private grants



In 2019, some of the largest contributions were

- € 1,038,061.25 from the EIT Health programme awarded to 27 projects.
- € 231,617.36 from Fundació Bancària Caixa d'Estalvis i Pensions de Barcelona to 4 projects.
- € 808,540.43 from La Marató of TV3 Foundation to 5 projects
- € 180,000.00 from Agència de Gestió d'Ajuts Universitaris i de Recerca (AGAUR) to 9 projects.
- € 422,811.64 from Agència per a la Competitivitat de l'Empresa (ACCIÓ) to 5 projects.



RESEARCH GRANTS AWARDED  
BY THE EUROPEAN COMMISSION

The year 2019 marked five years since the European Union launched its most effective instrument for funding research: the Horizon 2020 Research and Innovation Framework Programme. During this time, the University of Barcelona has secured funding for 136 research projects, amounting to over €51 million.

The UB's success rate with respect to Horizon 2020 is currently 12.60%, more than half a point higher than the European average. The University of Barcelona has increased the number of projects by 17% and the funding obtained by almost 29% over the previous framework programme.

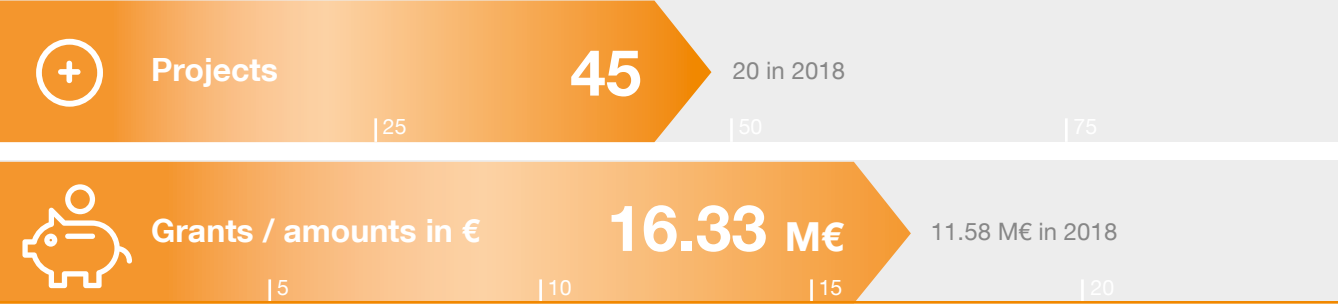
As for the pillars of this funding scheme, the UB's participation stands out in Excellent Science, a programme from which it has obtained funding for 88 projects amounting to almost €40 million; Societal Challenges, with 36 projects

and approximately €9 million; and Industrial Leadership, with 8 projects and almost €2 million.

In addition, Horizon 2020 includes two 'specific objectives' calls, Science with and for Society (SWAFS) and Spreading Excellence and Widening Participation (SEWP), from which the UB has obtained funding for four projects worth over €750,000. It is also worth noting the success in European Research Council (ERC) calls for proposals, with 15 projects selected for funding and €21.5 million, and the Marie Skłodowska-Curie actions, with 55 projects funded and €12.7 million.

In 2019, the results were as follows:

FIGURES / annual / Research grants awarded by the EU Commission



45 Projects

- 32 projects funded by the Framework Programme, with a revenue of €13.38 million, including six ERC projects:
  - 2 Consolidator Grants awarded to Dr. Inés Domingo (Faculty of Geography and History) and Dr. Pietro Tierno (Faculty of Physics).
  - 1 Starting Grant awarded to Dr. Javier Gómez (Faculty of Mathematics).
  - 3 FET Open awarded to Dr. Blas Garrido (Faculty of Physics), Dr. Mercè Masana (Faculty of Medicine and Life Sciences), and Dr. Guillem Aromí (Faculty of Chemistry).
- 
- 13 projects funded by other offices with a revenue of €2.95 million.

Highlights of 2019 include the completion of the "Resources from Urban Bio-waste" project (RES URBIS), led by Dr. Joan Mata, Professor of the Department of Chemical Engineering and Analytical Chemistry. The project demonstrates the feasibility of generating bio-plastics from urban organic waste, and confirms the technical and economic viability of the process, which would lead to more efficient refineries with less environmental impact. The project has lasted three years and has received almost €3 million in funding.



PROMOTING  
COLLABORATION  
BETWEEN UNIVERSITY  
AND SOCIETY

“The FBG is a fundamental tool for the University of Barcelona to dynamize the research carried out by its researchers. I am very satisfied with the work done at the UB, which I believe is comparable to what other universities do in other countries where I have worked, such as Germany and the United States. The FBG and the UB do an impeccable and excellent job both in the field of research and in the field of teaching. I believe that all the areas necessary to support researchers have been detected by the FBG and, despite not having the same budget as centres with greater funding, their work is comparable and in some cases I would dare to say that of a higher level of excellence. Since my return to Barcelona and the creation of my research group nine years ago, I can say that the FBG has been a fundamental part of the many scientific and transfer activities that I have developed at the University of Barcelona.”

Eva Estébanez,  
lead researcher of the Research Group on Molecular  
Bases of Fundamental Physiopathological  
Processes, Faculty of Biology  
(excerpt from an interview conducted in February 2019)

## SCIENCE + PARTNERS

The Bosch i Gimpera Foundation hosted the fifth edition of the Science + Partners event, which brings together specialists from the business world, investors, and researchers from the University of Barcelona. The event allows to deepen in the commercial potential of the technologies

presented, identifying the stages of maturation necessary to increase his attractiveness in front of the industry, and is at the same time a good opportunity for the partners to know first hand projects of investigation of the UB with a high transfer potential.



Science + Partners presentation, Bosch i Gimpera Foundation

“We received opinions about our project from both a business and a market perspective, we were given advice on how to make our product more attractive, and we even met potential partners to develop and test our product.”

Jordi Colomer, Faculty of Physics

“At Wayra we have found some possible synergies between Telefónica's business and some of the projects. We will keep an eye on them and evaluate them at later stages to determine their potential.”

Hernán Bastiani, Wayra Barcelona.

The fifth edition focused on Deep Tech, that is, highly sophisticated and high-impact technologies that require a broad maturation process before reaching the market and are generally focused on major societal and environmental challenges. The five projects presented during the event — all from the Faculty of Physics— were the following:

- “Urban Health Autonomous Monitoring”, presented by Dr. Jordi Colomer.
- “Qilimanjaro: Quantum Computing for Everybody”, presented by Dr. Víctor Canivell.
- “Cybersecurity Exploiting Chaos”, presented by Dr. Daniel Navarro;

- “ColorSensing: The New Quality and Freshness Standard for Packaged Food”, presented by María Eugenia Martín, CEO of the UB *spin-off* ColorSensing.
- “Programmable Array Microscope with Virtual Pinholing”, presented by Dr. Mario Montes.

The guest partners formed a very diverse committee of sector experts, composed of Àngel Bou and Joan Rojas, from Inveready; José Luis Gómez, from Bullnet Capital; Javier González, from Caixa Capital Risc; Cruz Mendigutía, from BeAble Capital; Elena Rico i Vilar, from People & Planet Partners; Àngel Sánchez, from Everis; Hernán Bastiani, from Wayra Barcelona; Jose Manuel Carol, from BStartup; Fernando Cuenca, from Minsait; Pedro Ribeiro, from Armilar Venture Partners; Edouard Rozan, from Onboard Ventures, and Alfonso Rubio, from Entanglement Partners.

## FUND FOR THE PROMOTION OF INNOVATION



Fourth edition of this call, which includes two types of grants: the Valorisation Fund (FVal) grant—endowed with €100,000—aims to fund proofs of concept of research projects, and the Mentor in Residence (MiR) scheme—with a total budget of €30,000—aims to promote the creation of new spin-offs. The UB has so far awarded €300,000 to 12 projects under the FVal call for proposals and €66,000 to 11 projects under the MiR call for proposals. During this time, these grants have fostered the creation of 4 spin-offs, the licensing of 3 technologies, the creation of 19 jobs and the procurement of more than €2.8 million in funding.



Award winners Fund for the Promotion of Innovation 2019 and members of the Bosch i Gimpera Foundation and Barcelona University.

### Awards granted in the 2019 call

#### Valorisation Fund

- Dr. Jordi Colomer Farrarons (Faculty of Physics). “Autonomous monitoring of water quality and its communication”.
- Dr. Daniel Navarro Urrios (Faculty of Physics). “Secure communications using optomechanical crystals in the chaotic regime”.
- Dr. Carles Galdeano Cantador (Faculty of Pharmacy and Food Science). “A novel approach to enhance the therapeutic efficacy to CAR-T cells”.
- Dr. Manuel Vázquez Carrera (Faculty of Pharmacy and Food Science). “New HRI activators for the treatment of non-alcoholic steatohepatitis”.

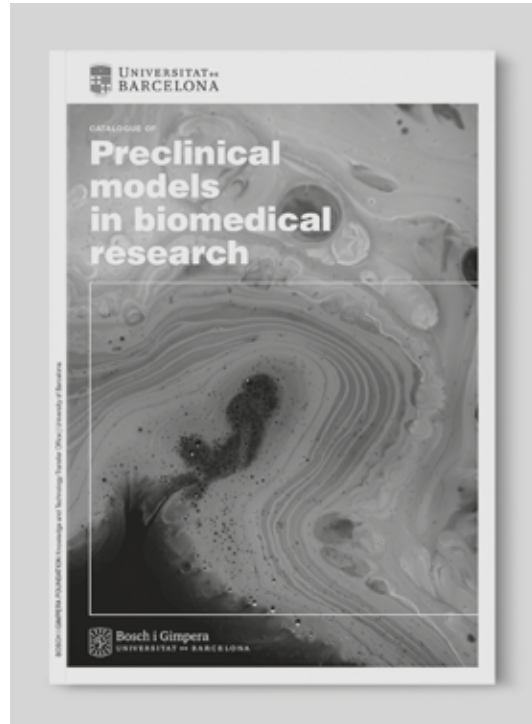
#### Mentor in Residence\*

- Dr. Guillem Feixas i Viaplana (Faculty of Psychology). “Explore Your Meanings (EYME) – A digital tool for the study of personality”.

\* The call remains open until the end of 2020. Applications will be processed as received until the budget allocated to the call runs out.



## CATALOGUE OF EXPERIMENTAL MODELS



Cover Models Experimentals catalogue  
Bosch i Gimpera Foundation. 2019

Experimental biomedical models are key to advancing the study of diseases and their treatment. Nowadays, they are widely used by most pharmaceutical companies, health and life science *start-ups*, and university R&D laboratories worldwide.

These models make it possible to test the efficacy and safety of several compounds without jeopardizing the health of human beings. They also facilitate the study of the factors that contribute to the development of a disease, its different phases and evolution, and the search for and validation of new therapeutic targets and pathways.

In order to promote the transfer of the wide variety of experimental models developed by researchers at the University of Barcelona, the FBG has gathered some of these models in the first edition of the Catalogue of Preclinical Models in Biomedical Research. The catalogue aims to be a tool for searching and identifying the most relevant experimental model for each disease and process under study, and will be updated periodically to expand the range of models available as research progresses at the university. These include both cell-culture-based (*in vitro* and *ex vivo*) models and animal (*in vivo*) models.

## SOCIAL INNOVATION LABORATORY

In 2019, we pushed forward the Social Innovation Laboratory project through actions aimed at increasing its visibility, such as the Living Labs, Open Innovation and Universities Workshop, which took place on 18 June and it was organized by the UB and the European Network of Living Labs.

In addition, we officially launched the first project in which the Social Innovation Laboratory will address issues related to good governance and regulation.

In 2019, we also started to work on the corporate image and website of the Social Innovation Laboratory, which will help to strengthen the promotional activities related to this project.



Jornades Living Labs 2019

**“The Social Innovation Laboratory allows us to work on contemporary social challenges by bringing together the best researchers from various disciplines and relevant social actors. The sum of the different fields of expertise and the diverse perspectives that affect a social problem provides a creative and informed context to generate new solutions to complex problems.”**

Francesc Benlliure,  
Bosch i Gimpera Foundation.

## OTHER DYNAMIZATION ACTIVITIES

A session in which GlaxoSmithKline (GSK) presented its "Discovery Partnership with Academia" (DPAC) programme, which aims to establish possible collaborations with researchers to develop new active drugs.

Briefing on The Collider innovation programme, promoted by Mobile World Capital Barcelona. The features of the programme and the novelties of this edition were presented during this session.

Seminar "Knowledge transfer at the UB, from research to society", aimed at promoting and encouraging knowledge transfer among researchers of the University of Barcelona.

Over fifty organizations and a hundred researchers from different Catalan universities met during the three-day Open Innovation Forum with the aim of finding solutions to innovation challenges.



Open Innovation Forum, 2019

As part of the 4th Beauty Innovation Day, students from the Professional Design Projects Laboratory of the Design degree presented companies with a sustainable packaging line for the cosmetics of the future.

The Business Creation area has held meetings to present incubated projects to more than thirty investment funds, both national and international, among which it is worth mentioning Asabys Partners, Invivo Ventures FCR, Ysios Capital, Sanofi Ventures, Sofinnova Partners, Advent France Biotechnology, and Beable Capital. In addition, the projects have also been presented at "Here comes your lead" and "The Investment Readiness Series", organized by Biocat.



GlaxoSmithKline (GSK) "Discovery Partnership with Academia"

## TRADE FAIRS & BUSINESS CLUSTERS

In 2019 we participated in 9 trade fairs and were present in 10 of the 29 clusters accredited by the Catalan government with the aim of intensifying collaboration with companies, getting to know their needs first-hand and pitching the research carried out at the UB.

### TRADE FAIRS

- Infarma.
- Forum TurisTIC (B-Travel)
- Sònar+D.
- Cosmetorium.
- Smart City.
- Bioequity 2019.
- The Investment Readiness Series 2019 (BIOCAT).
- 4YFN, Mobile World Congress.

### CLUSTERS

Water, Audiovisual, Beauty, Biotechnology and Health Technologies, Efficient energy, Food service, Advanced Materials, Optics and photonics, Children's products, and Mental Health.



# AWARDS OF THE SOCIAL COUNCIL OF THE UB AND THE FUNDACIÓ BOSCH I GIMPERA

## Antoni Caparrós Prize, for the best knowledge transfer project

**Awarded to Antonio Andrés Pueyo for the development of a preventive programme to assess and manage people's violent and criminal behaviour.**

Collaboration project between the Group of Advanced Studies in Violence (GEAV), led by Professor of Psychology Antonio Andrés Pueyo, and the Prison Service of the Government of Catalonia.

**Awarded to Irene García Cano for 25 years of collaboration to transform a precision mechanical workshop into a reference in the field of new materials.**

Collaboration project between the Centre for Thermal Projection (CPT) and the company Talleres Mecánicos Comas (TMCOMAS).

## Senén Vilaró Prize, for the best innovative business

**Awarded to Nostrum Biodiscovery (NBD), a spin-off of the University of Barcelona.**

"The most characteristic aspect of NBD is that we apply simulation techniques to drug discovery. These tools allow us to study with greater precision the structure, reactivity and flexibility of the macromolecular targets that modulate drugs", explains Modesto Orozco, founding partner of NBD. "This allows the studies we carry out for customers to produce a lower percentage of false positives and false negatives, thus improving predictions, increasing cost savings and accelerating the entire discovery process."

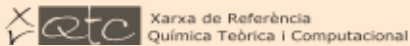
During the awards ceremony, recognition was given to the ongoing collaboration between the University of Barcelona and Esteve through the FBG, in research, development and innovation projects.



Awards ceremony, 2019

# GOVERNMENT OF CATALONIA REFERENCE NETWORKS

The FBG manages six reference networks of the Generalitat de Catalunya. During the year 2019, the FBG has presented, as coordinating entity, 5 proposals for the call for aid for R & D & I networks to carry out programs for the valorization and transfer of research results, which may be partially co-financed by the European Regional Development Fund (ERDF).





ENTRE PREGUNTA Y PREGUNTA

“La empresa debe estar más presente”

CARME VERDAGUER / Directora de la Fundació Bosch i Gimpera/ La máxima responsable de transferencia tecnológica de la Universitat de Barcelona (UB) pide al sector privado que cuente con las universidades para elaborar sus estrategias de I+D.

Gabriel Trindade, Barcelona  
La Fundació Bosch i Gimpera es el puente que conecta el I+D de la Universitat de Barcelona (UB) con el sector privado. En 2018, esta institución logró 32,7 millones de euros en contratos gracias a la colaboración con más de 600 empresas e instituciones privadas. Actualmente, cuenta con 124 patentes listas para su transferencia y ha logrado crear un ecosistema de 25 spin off a su alrededor. Su directora, Carme Verdagué (Vic, 1960), explica que la relación con la empresa aún debe crecer.  
- Se suele decir que la ciencia catalana es excelente, pero ¿se atrevería a poner una nota a la transferencia?

Es cierto que muchos indicadores dicen que la ciencia catalana está en un muy buen nivel. Pero es sobre todo destacable que todo eso se ha hecho en muy poco tiempo. A nivel de transferencia, estamos en la buena dirección. ¿Qué nota? No empezamos de cero, pero tenemos camino por recorrer. Estamos por encima del aprobado, seguro; entre un 6 y un 7.  
- ¿Cuál es el referente para la UB?

La transferencia es un campo muy amplio, con varios referentes. A escala española, las politécnicas tienen mucha reputación, lo que es lógico porque el conocimiento que imparte es muy aplicado y cercano al mercado. La UB es un referente. Es la única universidad española que está en la Liga de Universidades Europeas de Investigación, con centros como Oxford, Cambridge o Lovaina.  
- Entonces, ¿no hay nada que envidiar?

Hay mucho que mejorar pero también es importante recordar que somos capaces de aportar mucho. A veces, pensamos que estamos a años luz de estas universidades y la distancia muchas veces tiene que ver con los recursos disponibles. Nosotros hacemos

Si tenemos que ponernos una nota en transferencia tecnológica, la UB está entre el seis y el siete”



Segundo mandato en la institución

Verdaguer es la directora de la Fundación Bosch i Gimpera desde octubre de 2017, cuando sustituyó a Jordi Naval, el actual responsable de Biocat. Se trata de la segunda vez que está al frente de esta institución encargada de conectar la innovación de la UB con el sector privado. En la anterior etapa, fue directora entre 2007 y 2015. Verdagué es ingeniera química de formación por el Instituto Químico de Sarrià (Universitat Ramon Llull). Para perfeccionar su conocimiento del mundo empresarial, cursó un MBA por la University of California at Los Angeles (UCLA). Forma parte del consejo estratégico del EIT Health y participa en diversos patronatos, comisiones y consejos de administración.

ca, que es la que produce la innovación disruptiva, necesita ser una prioridad en los presupuestos. Las aportaciones del sector privado, al final, son decisiones de los propios investigadores, que tienen libertad de cátedra para decidir qué investigar.  
- Antes comentaba que las empresas deben desempeñar un mayor papel en la formación de los alumnos...

Es importante que las nuevas titulaciones o las adaptaciones que se hagan tengan en cuenta la opinión del sector privado, pero eso no quiere decir determinar los contenidos. Debemos preparar a los alumnos para que sean capaces de adaptarse a un futuro cambiante  
- ¿Tendría sentido estudios superiores en emprendeduría?

La emprendeduría es una competencia básica transversal que todos los estudiantes deberían tener aunque eso no signifique que todos sean emprendedores. Son herramientas que puedes utilizar en una empresa o, más adelante, si decides emprender.  
- ¿Los estudiantes quieren ser emprendedores? ¿Les suena Oryzon Genomics?

Aún no hemos llegado a ese punto. La emprendeduría es un tema que queda lejos de los estudiantes, pero poco a poco el ecosistema va creciendo y eso genera interés. La Universitat de Barcelona no lo puede hacer sola, por lo que debemos seguir colaborando con organizaciones como el Barcelona Tech City o la Mobile World Capital, entre otras.

muchas cosas con muy poco presupuesto.  
- Los rankings así lo reconocen...

Estamos muy contentos. En estas últimas semanas el ranking Top 100 de Reuters nos ha situado por cuarto año como la universidad más innovadora de España y la número 75 mundial, y somos la universidad española con más patentes, según la Oficina Europea de Patentes.

La empresa privada no puede financiar la universidad pública: sólo debe ser un complemento”

La emprendeduría aún queda lejos de los estudiantes pero poco a poco el ecosistema crece y eso genera interés”

La empresa privada debe estar más cerca de la universidad?

Tiene que haber mucha más relación entre ambos lados. La empresa debe contemplar la universidad como una parte de su estrategia para la innovación y la universidad debe facilitar dar esas respuestas con una relación más amplia e integral. Las empresas deben entender que la universidad proporciona muchas cosas: estudiantes en prácticas, infraestructuras de primer nivel e innovación. Incluso deben participar en el diseño de nuevas titulaciones  
- ¿Esta colaboración público-privada es una manera de suplir el déficit de financiación de la universidad pública?

No, esto es solo un complemento. Las universidades públicas deben estar bien financiadas. La investigación básica

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Incentivos para la transferencia

Verdaguer considera que, para que la transferencia tecnológica tenga sentido, debe haber un compromiso desde “el ministerio hasta el último estudiante”. La experta se congratula que, en la pasada legislatura, el Gobierno implementase el primer programa de evaluación de colaboración empresarial. “Los investigadores que trabajan con el sector privado lo hacen por voluntad propia, muchas veces en su tiempo libre, por lo que deben tener incentivos”, señala al respecto del programa piloto. Verdagué recuerda que el sistema bonifica mucho más para ser catedrático a los investigadores que publican artículos que a los que realizan transferencia.

SUCCESS STORIES AND PUBLICATIONS

SUCCESS STORIES

Examples of technologies and products that have been developed at the UB and reached the market

DAPCOM Data Services

From the stars to the seabed, Dapcom Data Services creates a program that compresses massive data.



CHIARA

Chiara, an application using technology developed by the UB that allows students to work on their speaking skills independently and without the assistance of a teacher.



PUBLICATIONS

Portfolio of services from UB's Knowledge and technology transfer office.

In 2019, a catalogue was designed in order to publicize the portfolio of services that the FBG can offer to companies and institutions as the UB's knowledge and technology transfer office. (TTO).





# INTERVIEWS

We interview researchers from the University of Barcelona in order to give visibility to their projects, and to disseminate and publicize the importance of knowledge transfer to society.



*“We found tests in which an unanswered question showed who was best qualified.”*

Jordi Renom,  
Faculty of Psychology.

*“If we can prevent androgen receptor dimerization, we can stop the progression of prostate cancer.”*

Eva Estébanez,  
Faculty of Biology.



*“Bullying is the least of our problems. Most forms of violence against children occur at the hands of an adult.”*

Noemí Pereda,  
Faculty of Psychology.



*“We still use the same antibiotics as decades ago, and this has helped bacteria become resistant.”*

Antonio Juárez,  
Faculty of Biology.



*“The quality with which sound information reaches a baby's brain can predict his or her future reading ability.”*

Carles Escera,  
Faculty of Psychology.



*“Current consumers are more diverse, better informed, more demanding, and less loyal.”*

Mel Solé,  
Faculty of Economics and Business.



*“Isotope geochemistry gives us a tool to see who is behind contamination.”*

Neus Otero,  
Faculty of Earth Sciences.



*“We want to establish our protein as a new therapy for autoimmune diseases.”*

Josep M. Grinyó,  
Faculty of Medicine and Health Sciences.



*“Food products are improving, but it all depends on consumer demands.”*

Andreu Farran,  
Faculty of Pharmacy and Food Science.



*“Our smart lighting makes indoor spaces healthier for people.”*

Javier Iglesias,  
Enlighting Technologies.



*“We believe we can provide tools to reinforce gender identity therapies through art.”*

Magda Polo,  
Faculty of Geography and History.



# ALL TOGETHER MEETING

All together meeting is an encounter of the staff of the FBG with a researcher of the University of Barcelona. It has the twofold aim of helping FBG staffers to better understand the work of researchers through the real cases of projects that they have have a hand in launching, and of letting researchers meet the FBG's staff in person.

2019 /  
We met:

F. Xavier Hernández,  
Heritage Didactics and  
Museography (DIDPATRI).



Jordi Vitrià,  
Data Science.



Jordi Suriñach,  
Regional Quantitative  
Analysis (AQF).







# THE INSTITUTION

“I had my first contact with knowledge transfer in 1989 and I am still involved in it now, which shows that I believe in it. At the research group level, at times such as the last few years, when the public funding of research was at its worst, knowledge transfer provided us with a very important source of income to pay the salaries of researchers associated with our research group. Besides economic benefits, and with regard to the very mission of researchers and public research centres, I think it is essential to show society that we do more than basic research: we are also capable of solving real problems of society and companies”

Antonio Juárez,  
lead researcher of the Research Group on Applied  
Microbiology and Veterinary Feeding,  
Faculty of Biology, which has been collaborating with  
companies and institutions for thirty years  
(excerpt from an interview conducted in September 2019)

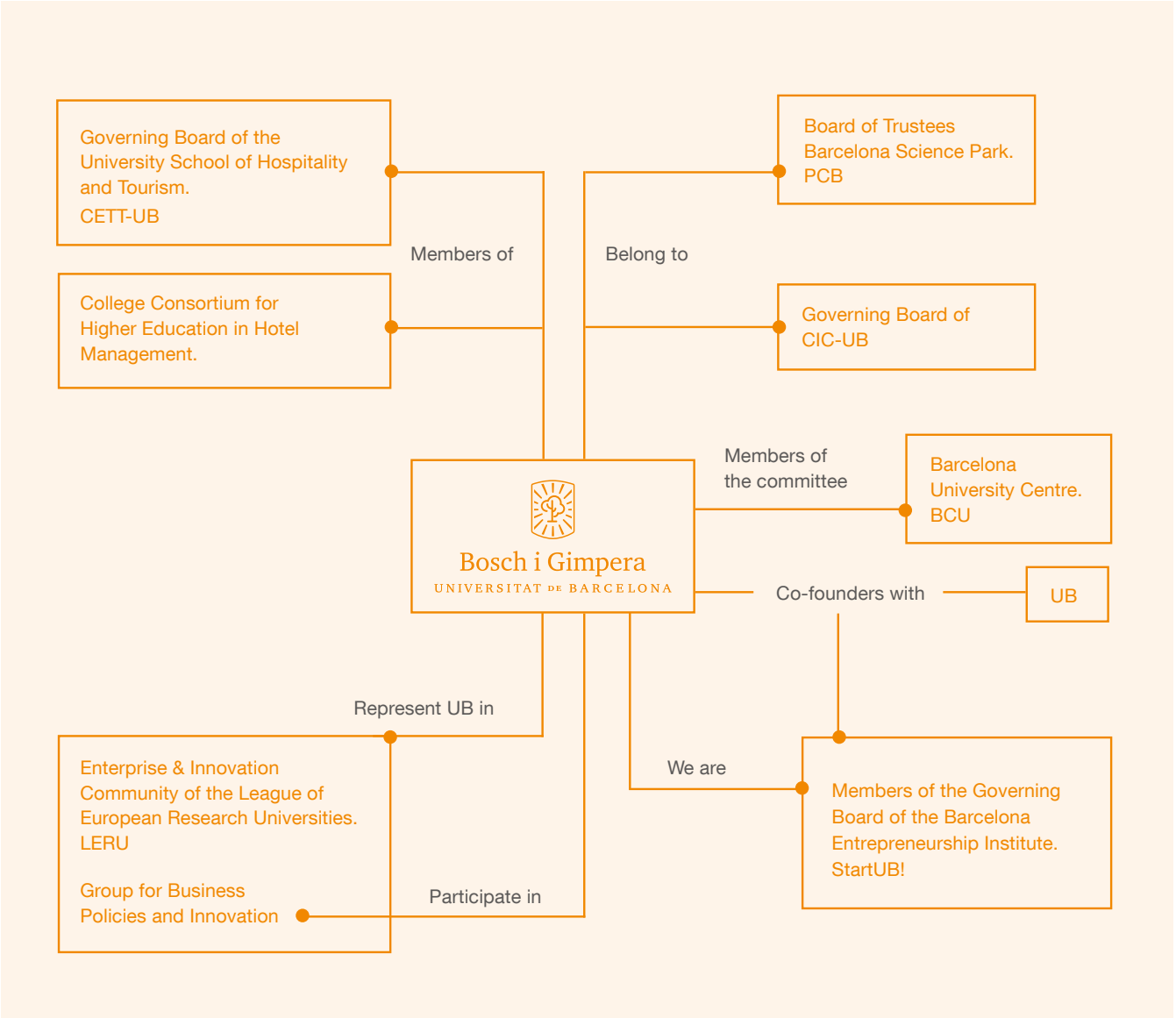


# BOARD OF TRUSTEES

- Joan Elias i Garcia / chair
- Joan Corominas Guerín / first deputy chair
- Francisco Esteban Bara / second deputy chair
- Belén Noguera de la Muela / secretary
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- Domènec Espriu Climent / board member
- Oriol Escardíbul Ferrà / board member
- Àlex Aguilar Vila / board member
- Carles Vivas Morte / board member (until 8 September 2019 for decease)
- Josep Mateu Negre / board member
- Antonio Solanas Pérez / board member
- F. Xavier Roigé Ventura / board member
- José Mª Martínez Delgado / board member
- Carles Penas Babot / board member
- Anicet R. Blanch Gisbert / board member
- Jordi Roig Bonet / board member

# WHERE WE ARE

The Bosch i Gimpera Foundation is a member of the Board of Trustees of the Barcelona Science Park (PCB) and of the Governing Board of CIC-UB. We also belong to the Governing Board of the University School of Hospitality and Tourism (CETT-UB) and the College Consortium for Higher Education in Hotel Management. We are also members of the Governing Board of the Barcelona UB Entrepreneurship Institute (Start UB, since September 2019), jointly founded by the FBG and the UB, and members of the committee of the Barcelona University Centre (BCU). We also represent the UB in the Enterprise & Innovation Community of the League of European Research Universities (LERU) and participate in its Group for Business Policies and Innovation.



# WHO ARE WE?



## Staff of the Bosch i Gimpera Foundation

### General Management:

- M. Carme Verdaguer, general manager.
- Berta Serdà and Inmaculada Soria\*\*, secretaries.

### Technical Office:

- Maria Segú, head .

### Communication and Marketing:

- Mariona Ferrer, head.
- Team: Nerea Oñate#.

### Management:

- M. Teresa Plo, manager.

### Administration, Financial Management, and General Services:

- Sergi Ros, head of administration.
- Ana Giménez, head of financial management.
- Team: Anna Apellániz, Digna Cárcoba, Emilio Cruz\*\*, Yvonne Mata, Arnau Sánchez,\* Daniel Pierrá, Sònia Salom, Gemma Sánchez, Eduard Savall, Cristina Serra, Marta Tort and Elisabeth Vico.

### Human Resources, Health, and Safety:

- Mercè Tejedor, head.
- Team: Pili Morales, Laura Ramos, Mireia Solsona and Sandra Tello.

### IT:

- Àlex Closa, head.
- Team: Andreu Valls.

### Public and International Grants Unit:

- Begoña Navarrete#, coordinator.
- Team: Digna Cárcoba, Albert Casas, Mònica Cunill, Pablo García\*\*, Víctor Linares and Florencia Nava\*\*.

### International Research Projects, UB-FBG mixed office:

#### FBG - Financial management:

- Xavier Gutiérrez, head.
- Team: Heura Boix, Anna Ferrando, Sheila López, Sandra Martin and Anna Rovira.

### Innovation and Knowledge Transfer:

- Lurdes Jordi, director.

#### Contract Research:

- Salvador Mena, head.

#### Valorisation and Licensing:

- Inma Íñiguez, head.

#### Business Creation:

- Jose Conde, head.

#### Contracts:

- Gemma Casamitjana, head.

#### Innovation and Knowledge Transfer team:

- Andrea Arbós\*\*, Francesc Benlliure#, Laia Crespo, Isabel Durán, Cristina Ferrer\*, Belén Gámez, Alba Ginés#, Raquel Jiménez, Eva Martín, Nil Neira#, Gloria Roselló, Miquel Sureda\*\*\*, Rosa Vázquez# and Dolors Vega.

### Staff linked to the Reference Networks of the Government of Catalonia:

- Anna Alsina\*\*, Pablo Bou, Silvia Chellini, Gemma Hernández, Karsten Kruger, Josep Pascual, Lali Sanz and Onditz Portabella\*\*

(\*) Interns.

(\*\*) Replacement of staff on maternity or temporary incapacity (TI) leave, voluntary resignation, or retirement.

(#) Staff linked to the REINNOVA UB-FBG project.



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