

Fundació
Bosch i Gimpera

Universitat de Barcelona

B:KC Barcelona
Knowledge
Campus

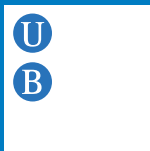
HUB^c Health Universitat
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ACTIVITY REPORT

2010

FUNDACIÓ BOSCH I GIMPERA





TURNING knowledge into economic and social value

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INTRODUCTION

Knowledge is today undoubtedly the key asset for the competitiveness of regions, and this knowledge must therefore be managed, transformed and transferred to the productive sector in the most appropriate way in each case.

We are convinced of the importance of transforming the knowledge generated at universities into an economic and social asset; in short, into welfare for society. The Fundació Bosch i Gimpera (FBG) plays a key role in the completion of the University of Barcelona's third mission, and one which it fully accepts.

On 8 February 2010, the University of Barcelona's Board of Governors approved a management mandate which entrusted the FBG with the management of the operation and transfer of the UB's research results, support for entrepreneurship and the management of the UB's shareholdings in the spin-off companies that have emerged from this activity. This task involves reinforcing the support for entrepreneurship that the FBG already provided, and centralising the activities of the Agency for Assessing and Marketing Research Results (AVCRI), a body created in 2005 to provide services in this area for the entire UB Group, in the Foundation.

As a result of this task, the Fundació Bosch i Gimpera has become the institution in the UB Group responsible for transferring to society the scientific and technical skills and the results of research generated at the University of Barcelona through R+D+i contracts or consultancy services and through the protection, valorisation and licensing of patents and the creation of new businesses based on knowledge.

The Foundation's business areas were reorganised in 2010. The Technology Transfer Area was divided into two new areas: Contracted Research, which fosters the contracting of R+D+i projects between UB research groups and companies and institutions; and Strategic Projects, which includes management of the Government of Catalonia's reference networks and the Firms Innovation Development Programme, among other initiatives. The promotion of knowledge transfer in the humanities and social sciences was also reinforced.

2010 saw the presentation of the "FBG-BKC proof of concept fund", to finance the outsourcing of activities that can add value to a technological project and facilitate its transfer by means of licensing a patent or starting a spin-off company. This is the first fund of its kind to be created by the FBG.

Moreover, the University of Barcelona's Board of Governors approved a regulation for business creation on 30 November 2010. This regulation complies with Organic Law 4 / 2007 (LOMLOU) and establishes the guidelines for the creation of technology-based companies by UB researchers. Before I conclude this introduction, I would like to express the gratitude of the Fundació Bosch i Gimpera in general and my own personal thanks in particular to all who have contributed with their work and support to the projects mentioned in this report, and especially to our colleague Lluís Giménez, who left us in 2011.

M. Carme Verdaguer
Managing director

2010 FIGURES FOR KNOWLEDGE, TECHNOLOGY AND INNOVATION TRANSFER

UNIVERSITY/SOCIO-ECONOMIC AGENT COLLABORATION:

R+D+I, consultancy, services and licenses contracts

Over 500	819	48,58
companies, institutions and governments have contracted projects with the FBG	projects	million euros

776 Spanish and international projects:

495 R+D+i projects and research services: 14,80 M €

281 technical services provided: 8,27 M €

43 projects with European financing: 25,51 M €

The number of people recruited through the FBG for work related to research projects was 236 in 2010. Of these, 83.54% are Spanish, 11.86% come from other European countries and the remaining 4.66% are from other countries.

Germany, Argentina, Austria, Belarus, Bulgaria, Chile, China, Colombia, France, Greece, Italy, Malta, Mexico, Poland, Portugal, Romania, Sweden, the United Kingdom and the United States.

PATENT PROTECTION, VALORISATION AND LICENSING

8	28	17
licensing contracts signed	patent priority applications	international patent applications (PCT)

55 inventions proposed by researchers.

Two patents in Europe and the United States began their national phases in 2010.

90 open transfer projects ended in 2010.

CREATION OF NEW KNOWLEDGE-BASED BUSINESSES

In 2010, advisory services for the preparation of business plans were provided and the presentation of **applications for funding worth a total of 2.58 million euros** were presented. The results are shown below:

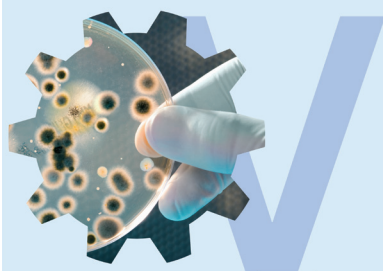
40	26	2	1
business creation ideas received	entrepreneurs' projects advised	EBT created: <ul style="list-style-type: none"> ImmunNovative Developments Innoquant 	shareholding in this subsidiary company through CIC-UB



CONTRACTED RESEARCH

2010 saw a fostering of the **promotion of knowledge transfer in the humanities and social sciences**. As a result, the FBG recruited a promoter specialising in these knowledge areas. The first objective is to analyse the UB's range of research in these disciplines, organise it and offer it to the market.

As a result of these initiatives carried out by the FBG in order to encourage companies and institutions to collaborate with the University, 18% of all projects contracted by the Foundation were proactively generated and given technical advice. 2010 saw the establishment of contacts with 245 companies and institutions, whose interest was evident in the 130 requests for information made on the UB's range of R+D+i and their stated needs to carry out 96 projects and services. Research is what enables the UB to provide a response to 85% of these needs, and 38% of that 85% become an offer to the company to undertake a collaboration project; and of those 38%, 25% ultimately sign a collaboration contract with the FBG. Furthermore, 136 projects were advised and negotiated between the company or institution and the research group, which have become research contracts.



VALORISATION AND LICENSING

The FBG presented several UB projects to the **"Value"** call of the AGAUR (Government of Catalonia), and of those, the project "Power generation based on small movements," by Professor C. Serre, of the Faculty of Physics, received funding. Meanwhile, the project "Multifunctional compounds modifying Alzheimer's disease," by Professor D. Munoz-Torrero, of the Faculty of Pharmacy, received funding as part of the Genoma España call **"Support for the commercialization of patents"**.

Of the **eight licensing contracts** that were arranged in 2010, five were from the Faculty of Medicine and three from the Faculty of Biology:

- *Aqueous solution for preserving organs and tissues* - Ramon Bartrons, Faculty of Medicine
- *Equipment for enhanced infrared vision of vascular structures, applicable for use in fetoscopic, laparoscopic and endoscopic surgery, and the signal treatment process to enhance this vision* - Edward Gratacós, Faculty of Medicine

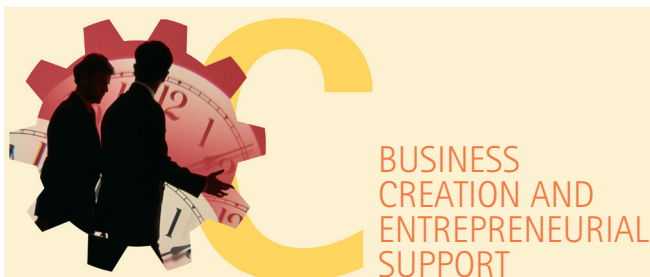
- *Electrosurgical instrument for cutting and coagulation of tissue* - Fernando Burdio, Faculty of Medicine
- *Hybridomas producing monoclonal antibodies directed against leukocyte membrane molecules* - Pablo Engel, Faculty of Biology
- *Protein product for the treatment of infectious and inflammatory processes* - Francisco Lozano, Faculty of Medicine
- *CD5 pharmaceutical compounds for the treatment of inflammatory and infectious processes of fungal origin* - Francisco Lozano, Faculty of Medicine
- *Procedure and system for detecting and / or quantifying bacteriophages capable of infecting a predetermined bacterial host strain* - Anicet Blanch, Faculty of Biology
- *Procedure and system for detecting and / or quantifying bacteriophages* - Anicet Blanch, Faculty of Biology

A **guide to best practices** was produced as part of the **European project Nano2Market** on the strategy for intellectual property and technology transfer in the field of nanotechnology. Using several case studies in various areas of technology (energy, materials, medical applications, IT, instrumentation, environment, food and safety), and based on the analysis of European nanotechnology projects, the aim is to produce a technological map which identifies the main players in the development and commercialisation of these technologies. The consortium consists of technology centres that supply the technology to be analysed, intellectual property and technology transfer agencies, venture capital experts, industry associations and experts in market analysis and technology monitoring all over Europe.

2010 was the second year of the **call for the Valorisation Project Programme (CVP)** financed by Banco Santander and the Fundación Marcelino Botín, which is endowed with a fund for the valorisation of projects amounting to one million euros over two years. The projects selected in this second call were related to photovoltaic systems, building improvements, gas sensors, new anti-cancer agents and the diagnosis of brain metastasis.

The call '**FBG-BKC Proof of Concept Fund**' was presented in 2010, and was financed by the Vice-rectorate of Innovation

and Knowledge Transfer and the International Campus of Excellence, Barcelona Knowledge Campus (BKC). This is the first fund of its kind to be created by the FBG. The aim is to finance the outsourcing of activities to add value to a technological project and facilitate its transfer, by means of a patent license or by creating a spin-off. The budget allocation was 91,487 euros and the maximum amount per project to be covered by this grant was 10,000 euros. 27 projects were presented, and 13 of these were selected.



Grants to technology-based companies fell considerably in 2010 in comparison with other years. In this context, it is important to mention the efforts of entrepreneurs who obtained significant amounts of money through their network of personal contacts (Friends and Family). Two companies received the loan for New Technology-Based Companies (NTBCs) from ACC10, one arranged the ACC10 Concept Capital loan, another became a Research and Development Project at the Centre for Technological and Industrial Development (CDTI, Ministry of Science and Innovation), and finally another obtained two Torres Quevedo grants for financing highly qualified professionals doing R+D work in the company.

The **Bioincubator** was joined in 2010 by the companies SiTec PharmaBio and Greenaltech, and the company UBAN Analítica left. There were a total of nineteen companies in the Bioincubator at the end of 2010. The FBG assigns a specialist consultant to each company in the Bioincubator, who works closely with the entrepreneurial team and advises them on issues related to technology licensing (in and out licensing) and on business development issues.

The FBG is responsible for monitoring the spin-off companies in which the UB has a shareholding through the company **Cultura Innovadora i Científica UB (ICC-UB)**. In 2010, CIC-UB became a shareholder in the company ImmunNovative Developments, SL as an initial return for its contribution of

two patent applications from the University of Barcelona, Fundació Clínic for Biomedical Research the Hospital Clínic, and sold its shares in the company Thera Centre de Llenguatges i Computació, SL to one of the partner entrepreneurs. In 2010, the UB had shareholdings in seven companies through ICC-UB: **Enantia, SL; Genmedica Therapeutics, SL; Biocontrol Technologies, SL; Neurotec Pharma, SL; ImmunNovative Developments, SL; Analytical Biotechnology Unit, SL (UBAN)** (joint venture) and **Oleoyl Estrone Developments (OED)** (subject to tender).

The FBG manages the **UB Entrepreneurship Chair**, and created the **University Enterprise Network** in 2010. It is headed by the Chair through the FBG, and aims to promote the entrepreneurial spirit in Catalan universities, to foster innovative ideas in business ventures that are established at universities and to provide them with support, help them grow and consolidate business initiatives, and generate knowledge to enhance the value of university entrepreneurship. This network includes the leading public universities in Catalonia (the Autonomous University of Barcelona, the Polytechnic University of Catalonia, Pompeu Fabra University, the Open University of Catalonia, the University of Lleida, the University of Girona, Rovira i Virgili University, the University of Vic and the Mataró TecnoCampus), and was created with funding from the call for innovative projects by the Employment Service of Catalonia (Ministry of Labour) of the Government of Catalonia.

The following **companies advised by the FBG were awarded prizes in 2010**: Intelligent Pharma, with the prize Barcelona Capital Emprenedora prize - Catalonia Entrepreneur XXI category; Transmural Biotech, with the Caixa Manresa Entrepreneur prizes and VCN Biosciences and ImmunNovative Developments, with the 1st and 2nd prize of the Bioemprenedor XXI programme.

THE PROMOTION OF INNOVATION AND KNOWLEDGE TRANSFER

COMMERCIALISATION

We promote the UB's research, and seek companies that can develop the UB's technologies and take them to market.

Twenty technology offers for some of the UB patents that we aim to transfer have been written. The technology offer is a one-page commercial summary highlighting the main sales arguments for the technology that we want to transfer.

Research at the UB is structured by business sectors, and two **catalogues** are being produced, one for **the UB's services and expertise** and the other on the **UB's research centres and groups**.

In order to promote the UB's scientific and technological range, grouped by business sectors, and to commercialise its technology portfolio, we attended **14 trade fairs and conventions** in Spain and internationally, as well as **25 workshops and seminars** related to innovation and technology transfer.

DISSEMINATION

The seminars organised by the FBG for the dissemination of the various types of transfers to researchers were consolidated.

- **TRANSFEREIX! Make your research reach the market. Add value to your result and transfer it.** The first edition event was organised, and was attended by 76 people, most of whom were from the faculties of Chemistry and Pharmacy (Barcelona, October 6, 2010).



- **COL-LABOREM? Make your knowledge reach the market; work with companies and institutions.** 64 people from thirteen different schools participated in this second event, and were mainly from the faculties of Biology and Pharmacy (Barcelona, 28 October 2010).



- **CREA! EMPRESA. Meet UB entrepreneurs and learn from their professional experience.** The fourth event was organised, and was attended by 65 people, mostly from the Faculty of Economics and Business (Barcelona, 16 November 2010).



We are present at the most important events related to entrepreneurship, technology transfer, patents, investment funds and R+D, among other areas; in various sectors such as automotion, the pharmaceutical industry, health, the environment, energy, construction, tourism and culture, among others.

Thanks to the FBG's more than twenty-five years of experience in knowledge transfer, every year we are visited by various institutions, from both Spain and abroad, who want to find out about the work and activities done at the FBG.

DEVELOPMENT

Firms Innovation Development Programme. This third programme was joined by seven UB researchers with experience in various business sectors, as tutors for the graduates during their time spent in the companies, in order to strengthen the relationship between the companies, the research groups and the graduates. A total of 21 of the 42 graduates who went through the programme have since joined an SME.

The FBG coordinates the groups within the UB's **TECNIO ACCIÓ** network. In 2010, the UB had eleven centres in the TECNIO network, with a team of over 70 researchers. The overall turnover of the TECNIO-UB groups was 13,321,583 euros, with an average turnover per centre of 1.2 million euros. The source of funding for UB 2010 IT centres was 57% public and 43% private. 58% of the total public income came from participation in competitive projects, of which 67% are international projects. R+D projects took place with 112 different clients, and in overall terms the UB IT centres applied for a total of ten patents. Various TECNIO grants were applied for, and five grants for technology valorisation were obtained, as well as six grants for action plans aimed at the centres' growth and consolidation of schools, which amounted to 276,100 euros.

A catalogue of the various scientific and technological programmes making up the **UB Innovation and Advanced Technologies Centre (CITA-UB)** was produced in 2010. The areas in which the more than over 70 researchers worked included:

- Food technologies: food safety and quality.
- Sustainable development: the environment, energy and water.
- Industrial processes: construction, automotion, plastic, coatings (paintings, varnishes, etc.), development of new materials and chemical processes, among others.
- Health and quality of life: the pharmaceutical, biotechnology and medical technology areas.
- Information and knowledge society: instrumentation, computer linguistics, software, ICTs, etc.

The Fundació Bosch i Gimpera manages five of the eight **Government of Catalonia reference networks**. In 2010, the Advanced Materials for Energy Reference Network (XARMAE) joined the Energy Research Institute of Catalonia (IREC), but the Fundació Bosch i Gimpera began to manage the Biotechnology Reference Network (XRB). The FBG currently manages the following networks: the **Economics and Public Policies Reference Network (XREPP)**, the **Applied Economics Reference Network (XREAP)**, the **Food Technology Reference Network (XaRTA)**, the **Theoretical and Computational Chemistry Reference Network (XRQTC)** and the **Biotechnology Reference Network (XRB)**. In overall terms, the projects generated and / or advised have been contracted by promoters amounting to 788,459 euros.

PROJECTS

As part of the **Campus of International Excellence** call, the University of Barcelona and the Polytechnic University of Catalonia are carrying out the Barcelona Knowledge Campus project (BKC). The transfer projects presented by the UB through the Fundació Bosch i Gimpera basically took the form of three clearly defined initiatives that fit the spirit of the call perfectly. The three areas for action were the launch of the 'Proof of Concept Fund', the Firms Innovation Development Programme and the promotion of knowledge transfer, with a special emphasis on the humanities and social sciences.

The winners of third **UB Board of Trustees and Fundació Bosch i Gimpera prizes** for the best knowledge transfer project and the best innovative company in 2010 were as follows:

- The **Antoni Caparros Prize**, endowed with 5,000 euros, was awarded to Sílvia Busquets Rius, associate professor of the Department of Biochemistry and Molecular Biology of the Faculty of Biology, for the project "Formoterol: a new therapeutic strategy in the treatment of cachexia." The recipient of the knowledge transfer is a pharmaceutical company in Cambridge (United Kingdom) specialising in the development of products

for the treatment of symptoms in cancer patients. The patent license was granted to this pharmaceutical company in June 2008, and it is currently conducting a Phase IIA clinical study with hospital patients at the Edinburgh Royal Infirmary to confirm its anticachectic usefulness in humans;

- the **Senén Vilaró Prize**, endowed with 10,000 euros, was awarded to Intelligent Pharma SL. This company, founded in 2007 with support from the Fundació Bosch i Gimpera and located in the PCB-Santander Bioincubator, provides computer services for pharmaceutical and life sciences companies based on the Helios software developed by the company itself. With a team of thirteen highly qualified professionals, in 2010 it doubled its turnover, opened its first international office in the Technology Park in Heidelberg (Germany) and next year it expects to open another office in Cambridge (United Kingdom) and one in the U.S.A.

The Fundació Bosch i Gimpera and the UB's Science Communication Unit are developing a **board game** to promote and raise the profile of knowledge transfer in society, and have received a grant from the FECYT in the promotion of the culture of innovation among the public category. The general objective of this game is to emphasise the investigative spirit and excellence in university research and to raise the profile of knowledge transfer process by highlighting some of the major scientific, technological and humanistic breakthroughs that took place in the twentieth century. The game will have Catalan, Spanish and English versions, and its presentation is anticipated for September 2011.

The **competitive projects ongoing** in 2010 were: two OTRIS grants funded by the Ministry of Science and Innovation, a 4-year Strategic Transfer Plan (PETRA) for the OTRI Subprogramme of the Secretariat of State for Universities of the Ministry of Science and Innovation, a VALFUS grant (ACC10) to carry out the University of Barcelona Innovation and Advanced Technologies Centre - CITA-UB project, a grant for the promotion of scientific culture and innovation awarded by the Spanish Foundation for Science and Technology (FECYT), a grant for transfer projects within the Campus of International Excellence BKC Barcelona Knowledge Campus-BKC awarded to the UB, a grant for technical support staff from the Ministry of Science and Innovation, a grant to the ACC10 valorisation units, a CONNECT-EU Talent - Universities Management Offices (CONT1-2010) grant, and a call for innovative projects by the SOC (Catalonia Employment Service) of the Government of Catalonia's Ministry of Labour to create the University Entrepreneurship Network.



INSTITUTIONAL AREA

THE BOARD OF TRUSTEES

Mr. Dídac Ramírez, chairman
 Mr. Joaquim Coello, first deputy chairman
 Mr. Àlex Aguilar, second deputy chairman (until January 2010)
 Ms. Silvia Atrian, second deputy chairman (from April 2010)
 Mr. Jordi Alberch
 Ms. M. Teresa Anguera, member
 Mr. Enric I. Canela
 Mr. Jordi Damià (until September 2010)
 Mr. Joan Corominas
 Mr. Rafael Foguet
 Mr. Jordi Roig
 Mr. Sergi Loughney
 Mr. Miquel Àngel Cuevas (until January 2010)
 Mr. Pere Lluís Cabot (from June 2010)
 Mr. Fernando Albericio
 Mr. Josep A. Plana
 Mr. Pablo Cigüela
 Mr. Fernando Tejerina
 Ms. Elionora Solé (until October 2010)
 Mr. Miquel Perdiguer
 Mr. Jordi Camós, secretary

The Bosch i Gimpera Foundation is represented by its managing director on the **boards of trustees** of the University School of Hospitality and Tourism (CETT-UB), the Barcelona Science Park (PCB) and the Institute for Biomedical Research (IRB).

Its presence in institutions such as ProTon Europe, Technology Innovation Information (TII) the League of European Research Universities (LERU) (the University of Barcelona joined the LERU in January 2010, and the FBG is the institution responsible for the transfer of the UB's knowledge) RedOTRI and Redfue means that the FBG is present in Spanish and international forums and can contribute to improving the laws, regulations and public funding in the area of knowledge transfer.

The FBG, represented by its managing director or other members of the various areas or departments, is a **representative** as a member of the jury of the City of Barcelona 2010 awards in the technological innovation category; it is a member of the Advisory Board of the second "Creativity Management in the Innovation Society" Summer School and a member of the commission assessing calls of grants; it coordinates the RedOTRI working group for the Valorisation of Research Results and the RedOTRI

working group on Communication on the Transfer Function, and is a member of the Advisory Council of the BioEmprenedor XXI programme, of the consulting group of the KIC Valorisation Agency and the committee of technology transfer directors of universities belonging to the LERU.

The team: Ambel, Albert, personnel management and human resources; Apellaniz, Anna, administration and management; Casamitjana, Gemma, contracts; Casta, Àlex, business creation; Closa, Àlex, technology; Closas, Andreu, administration and management; Conde, José, valorisation and licensing; Díaz, Mireia, contracts; Durán, Laia, administrative support; Durán, Isabel, valorisation and licensing; Esparbé, Isaac, contract research; Falcó, Josep Lluís, business creation; Ferrando, Anna, administration and management; Ferrer, Mariona, communication and marketing; Gámez, Belén, valorisation and licensing; Giménez, Lluís (+), administration and management; Giménez, Anna, administration and management; Gutiérrez, Xavier, economic management of international research projects; Hernández, Gemma, valorisation and licensing; Hierro, Juan, strategic projects; Iñiguez, Inma, valorisation and licensing; Jiménez, Raquel, contracts; George, Lourdes, business creation / valorisation and licensing; Llobet, Vanessa, economic management of international research projects; López, Sheila, economic management of international research projects; López, Montse, strategic projects; Martín, Sandra, economic management of international research projects; Martín, Eva, valorisation and licensing; Mata, Yvonne, reception; Mena, Salvador, valorisation and licensing; Morales, Pili, health and safety; Moreno, Raúl, valorisation and licensing; Navarro, Miguel, technology; Nieto, Delfina, contract research; Orellana, Charlotte, communication and marketing; Pérez, José Manuel, economic management of international research projects; Pierrá, Daniel, administration and management; Plo, Teresa, administration and management; Pons, Roger, contract research; Rimbau, Esther, business creation; Ros, Sergi, administration and management; Roselló, Gloria, contracts; Salom, Sònia, administration and management; Sanjuán, Irene, economic management of international research projects; Sánchez, Gemma, administration and management; Secall, Sara, business creation; Segú, Maria, technical office; Segui, Margalida, contract research; Serdà, Berta, secretary to the director; Solsona, Mireia, human resources; Tejedor, Merced, human resources and health and safety; Tejero, Ismael, strategic projects; Tello, Sandra, human resources; Tort, Marta, administration and management; Ugía, Cristina, communication and marketing; Vega, Dolors, contracts; Verdager, M. Carme, Director; Viñals, Marta, human resources.