



Study in Catalonia. Networking breakfast Wednesday, 28th of May



Generalitat de Catalunya
Government of Catalonia









- **ABOUT CATALONIA – Assets and Values**
- **HIGHER EDUCATION IN CATALONIA – International relevance**
- **EXCELLENCE IN R&D – Outstanding among the best**
- **CALIFORNIA - CATALONIA – Opportunities for collaboration**



ABOUT CATALONIA Assets and values

This is what you probably know about Catalonia...

BARÇA



DALÍ



Olympic games



Sagrada Família



Nice landscape and good weather



Cuisine, Ferran Adrià



Best Photo of 2013 by The Wall Street Journal's readers

ABOUT CATALONIA

Now, what you may not know....



Catalonia, with an **area of 32,106** square kilometres, represents the 6.3% of the Spanish territory. Its **GDP per capita** is **27,698 €**, which is above the European Union average (data 2012)

A top tourist destination, Catalonia also has a long industrial tradition and clear-cut plans to expand its business horizons.



With one of the highest standards of living in Europe, Catalonia offers a first-class environment to live and do business.



Catalonia's assets

1.5% of EU-27 population

1.6% of EU-27 GDP

1.3% of EU-27 exports

16% of Spanish population

20% of Spanish GDP

25% of Spanish industry

30% of Spanish foreign trade



Area	32,106 km ²
Population	7.6 Million
Average temperature	16-17°C
Average daylight hours	12 h 57 min
GDP mp 2011	€ 210.15 billion
Agriculture (GAV 2011)	0.95 %
Industry (GAV 2011)	20.30 %
Construction (GAV 2011)	10.58 %
Services (GAV 2011)	68.17 %
Tourism (visitors 2011)	17.9 million
GDP per capita 2012	€ 27,698
Exports 2011	€ 55.53 billion
Imports 2011	€ 70.85 billion
R&D expenditure 2012	1.51 % GDP

With a **population** is similar to Bulgaria and Austria, a **GDP** greater than Finland's and the Czech Republic's and similar to Denmark's, Catalonia's economic position in Europe is noteworthy. Its **exports** are similar to Portugal's, and exceeds countries like Romania and Greece. Its **GDP per capita** is 8,6% above the European Union average, greater than the UK's and Italy's.

Catalonia's assets

■ Talented

- educated-creative-solid work ethic
 - 41.8% of population aged 30-34 own a Higher Education degree (above the EU's percentage, 35.7%)

■ Global

- connected-mobile-open-attractive
 - Barcelona hosts the Mobile World Congress (since 2006)

■ Innovative

- competitive-dynamic-diverse
- technological-business friendly
 - Barcelona, winner of the first iCapital award by the European Union

Catalonia's assets

■ Creativity

Catalans like ideas, and they like putting them into practice in a whole range of different fields: graphic design, art, urban planning, architecture, fashion, gastronomy, industry...

- Large-scale design projects (DHub, BCN Design Week)
- Renewed design training centers
- Tradition, knowledge and experience
- Design applied to people's needs
- Design studios and corporate design centers (Alstom, Volvo, HP, Roca...)

Catalonia's assets

- Excellence
 - Catalans have an entrepreneurial spirit and are focused on identifying opportunities and finding innovative solutions.
 - This innovative spirit and a solid, collaborative work ethic has allowed Catalans to stand out in their particular areas of excellence.

Catalonia's assets

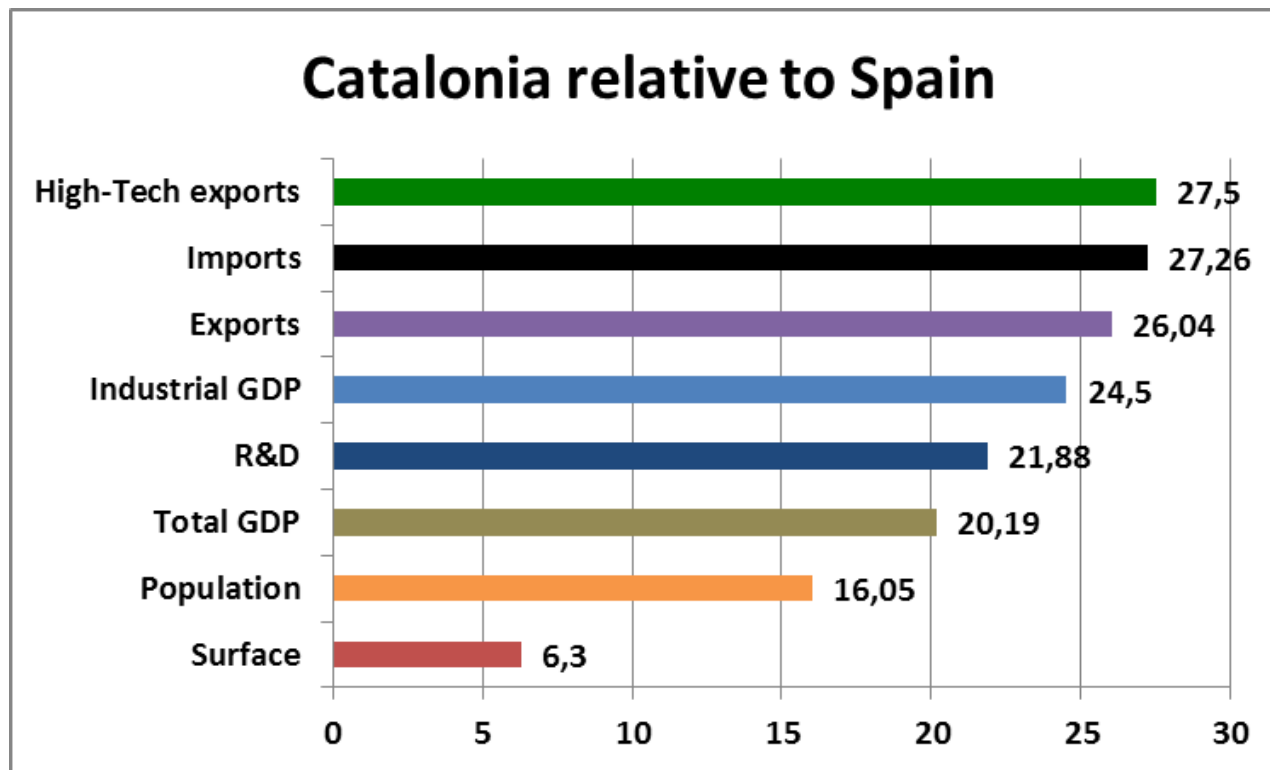
- Openness
 - Historically a trading nation
 - Catalonia's economic activity has always depended on its connectivity to the world.
 - Necessity-drive, Catalonia's reaching-out skill has become one of the area's major talent
 - Catalonia is today an unbeatable meeting point for international business.
- Its cultural diversity, cosmopolitan atmosphere, lifestyle and history **attract talent from worldwide**

Catalonia's assets

- Barcelona (capital city):
 - A metropolitan area similar to Frankfurt, Munich and Rome in terms of population (4.8 million)
 - 3rd World Fashion Capital (The Global Language Monitor, 2012)
 - International Congress and Convention Association (ICCA)
 - 1st city in the world for international MEETING delegates 2008-2012
 - 3rd city in the world for international MEETINGS 2008-2012
 - 5th city in the world for the organization of international MEETINGS 2012)
 - 10th European City for Global Competitiveness (Mori Global Power City Index, 2013)
 - One of KPMG's (2011) world's top 10 attractive locations and top 10 Green sites.
 - 1st Southern European city and 2nd Best European region by FDI Strategy (FDI Intelligence, 2012).
 - The world's second city in hosting International Congresses (ICCA/BTCB, 2011).
 - 1st European City in number of Cruise passengers
 - Since 1996 has retained its number one ranking as Europe's best city in Europe in terms of employee quality of life (European Cities Monitor, 2011. Cushman and Wakefield)

Catalonia's assets

Catalonia is the main economic driver within Spain, with higher impact of economic activity than its size or population percentages.



Source: IDESCAT (2012) and Invest In Catalonia

Knowledge Map

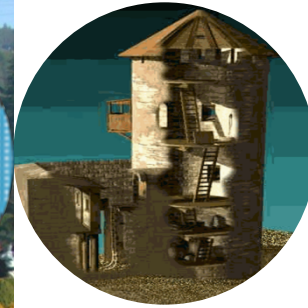


Barcelona

Source: SUR 2013

227,000 students and more than 400 different degrees and 500 masters
25,000 researchers: about 14,000 at Universities, 4,500 at CERCA CENTRES, 1,500 at CSIC Centers and 5,000 at Health Research Institutes

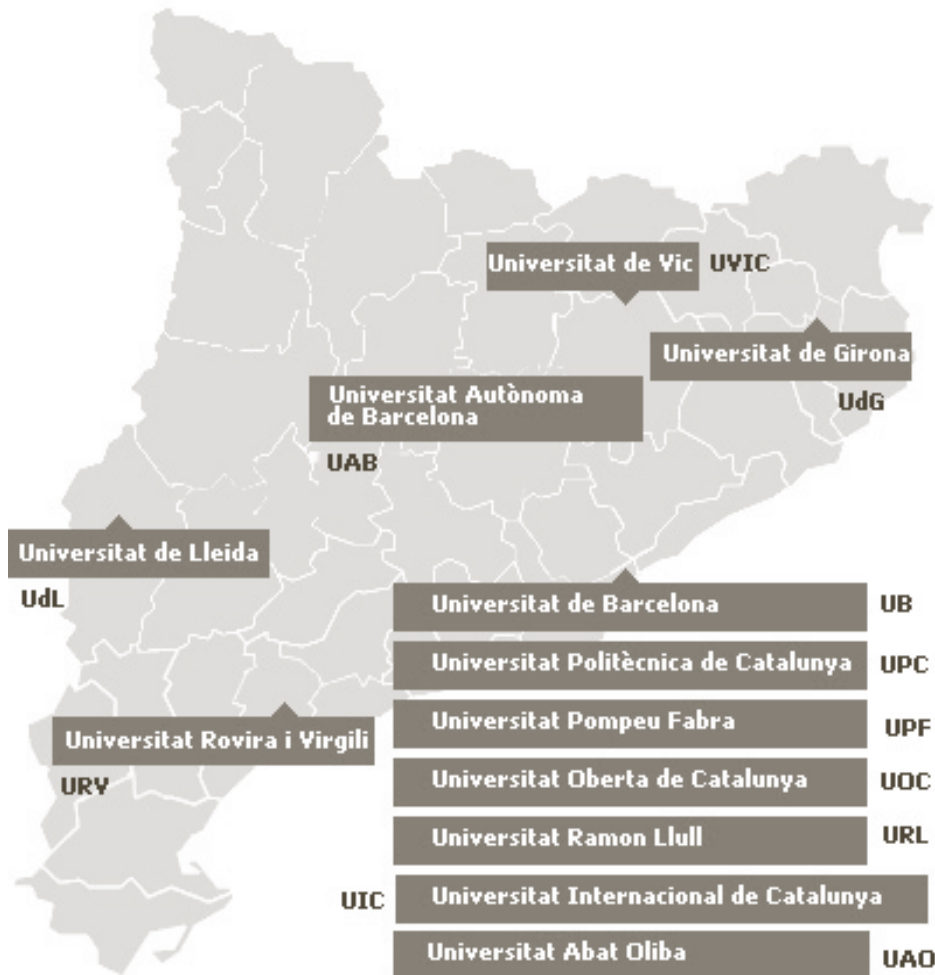
About 45,000 people working on RDI in Catalonia, about 1.50 % of working population



HIGUER EDUCATION IN CATALONIA: International relevance

Higher Education system

Catalonia has a significant number of **educational centres** per population



A sign of Catalonia's excellence in Higher Education is the number of **students from abroad** Catalonia

- 12 public and private universities
- Over 227,000 students
- More than 400 different degrees and 500 masters
- Campus of International Excellence
- 1% of world scientific production (Nature)
- Two of the top five best executive education schools around the world
- European standards: all programs adapted to the Bologna process (ECTS).

3,000 organizations from over 5 countries recruit employees through ESADE every year.

ESADE
Business School

In 2011-2012 780 students attend IESE Master programmes, 80% from abroad

IESE
Business School
University of Navarra

UNIVERSITIES OF CATALONIA

PUBLIC UNIVERSITIES



Universitat de Barcelona
www.ub.edu



Universitat de Lleida
www.udl.cat



Universitat Autònoma de Barcelona
www.uab.cat



Universitat de Girona
www.udg.cat



Universitat Politècnica de Catalunya
www.upc.cat



Universitat Rovira i Virgili
www.urv.cat



Universitat Pompeu Fabra
www.upf.cat

UNIVERSITIES OF CATALONIA

PRIVATE UNIVERSITIES



Universitat Ramon Llull

Universitat Ramon Llull

www.url.cat



Universitat de Vic

www.uvic.cat



Universitat Internacional de Catalunya

www.uic.es



*Universitat
Abat Oliba CEU*

Universitat Abat Oliba CEU

www.uao.cat

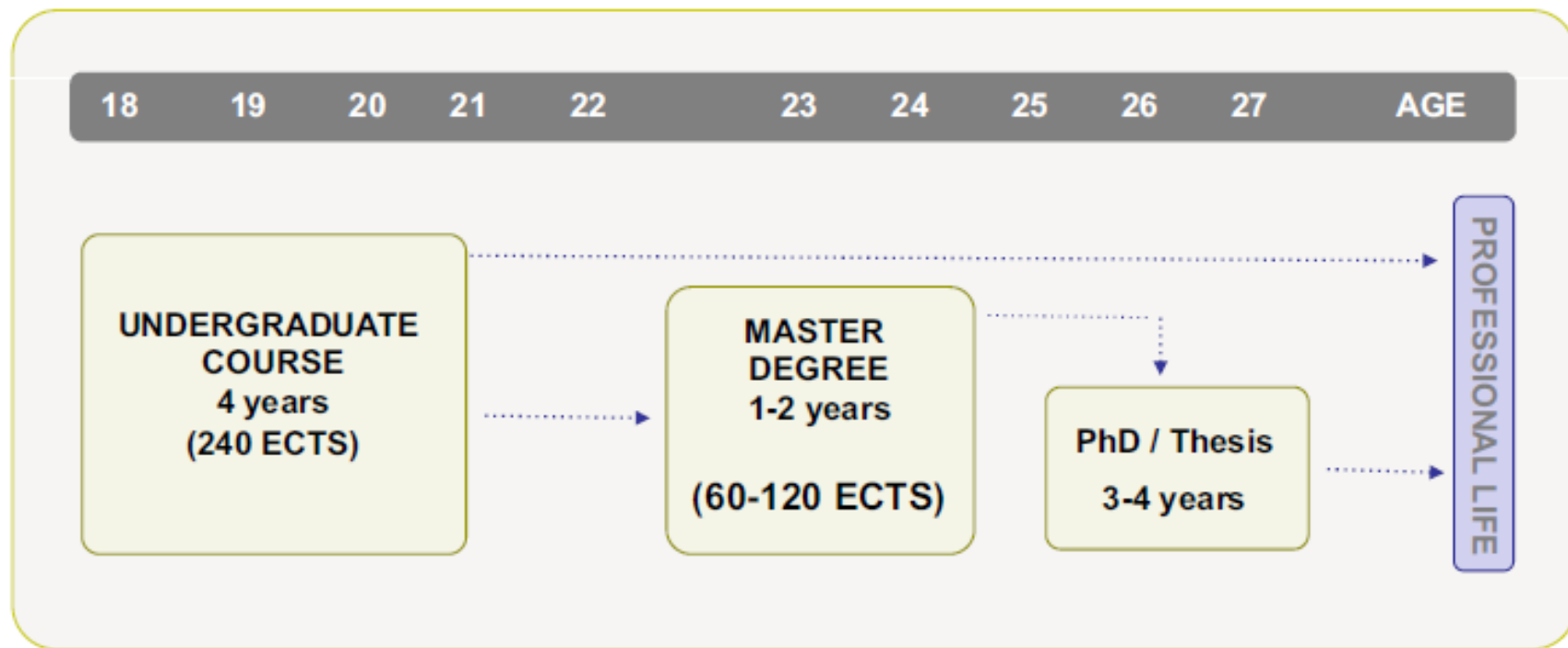
ONLINE UNIVERSITY



Universitat Oberta de Catalunya

www.uoc.cat

STRUCTURE OF UNIVERSITY STUDIES IN CATALONIA



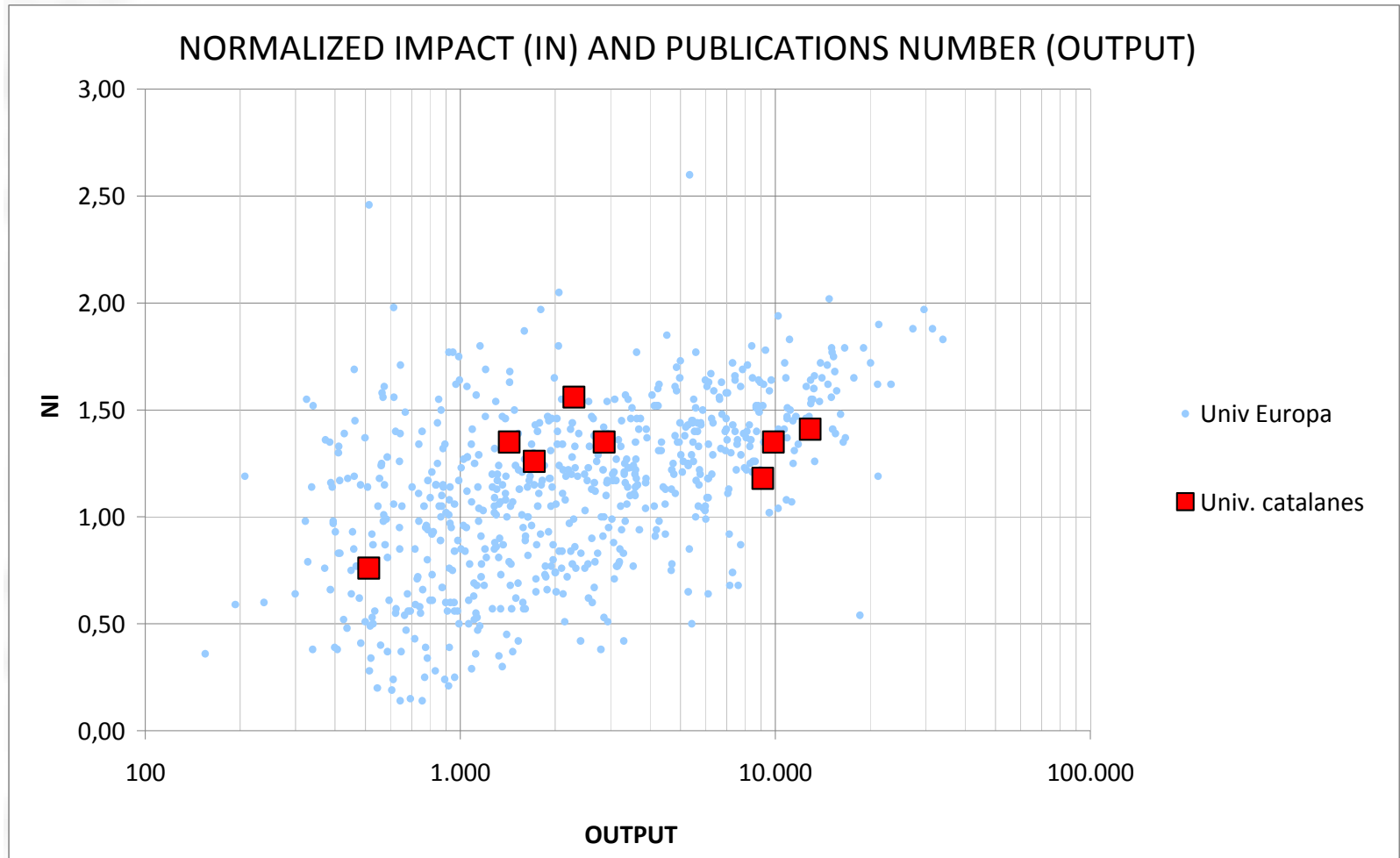
EXCELLENCE

→ **Highly internationalized environment *in principle***

→ **Distributed excellence as reflected in University and BA education global rankings:**

- Architecture, Urbanism (no ranking but consensus)
- Business Administration and Executive Education
- Economics, Econometrics, Finance
- Medicine, Biomedicine, Pharmaceutical
- Natural Sciences (at large)
- Political Sciences
- Information and Communication Technologies
- Other subject areas in:
 - Arts and Humanities
 - Engineering and Technology
 - Social Sciences

SCIENTIFIC PAPERS BY UNIVERSITIES





POWERED BY THOMSON REUTERS

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RANKINGS ▼

COMPARE UNIVERSITIES

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Top 10 best cities for higher education



There are many things that make a great city for higher education – a rich cultural scene, a safe environment, a reasonable cost of living and much more, depending on personal priorities. But the most important ingredient has to be a high concentration of top universities.

A city full of great universities creates what London mayor Boris Johnson has called “a cyclotron of human beings” – bringing together a diverse and exciting range of talented people, who collide to create a creative, innovative and inspiring environment.

Based on the number of institutions from each city which appear in the *Times Higher Education World University Rankings top 400*, *Times Higher Education magazine* has compiled a list of the top 18 cities.

The top 10 best cities for higher education:

Rank	City	Institutions in WUR top 400
10	Barcelona	3
7=	Sydney	4
7=	Melbourne	4
7=	Tokyo	4
5=	Seoul	5
5=	New York	5
3=	Paris	6
3=	Hong Kong	6
2	Boston (and surrounding areas)	7
1	London	9

M'agrada Tweet 86 +1 3



STUDY, LEARN, WORK, RESEARCH AT...



A profile powered by THE WORLD UNIVERSITY RANKINGS

Tweets



Phil Baty
Tue 25th Mar 2014 09:39 am

@Phil_Baty Willetts does not rule out

Barcelona, the 10th Best City for Higher Education

<http://www.timeshighereducation.co.uk/world-university-rankings/news/10-best-cities-for-higher-education>

BUSINESS SCHOOLS' EUROPEAN CLUSTER

Rank	City	MBA international students	MBA international students per million inhabitant
1	Boston	1,820	404
2	NY	1,054	55
3	London	1,013	68
4	Chicago	926	97
5	Barcelona	857	159
6	Paris	830	80
7	Toronto	815	146
8	Raleigh-Durham, NC	684	402
9	Singapore	669	126
10	San Francisco	662	103

Rank	City	MBA international students	MBA international students per million inhabitant
11	Philadelphia	641	107
12	LA	529	41
13	Madrid	520	81
14	Detroit	445	87
15	Washington DC	390	68
16	Shanghai	320	19
17	Richmond-Charlottesville, VA	317	226
18	Indianapolis	306	146
19	Manchester	301	182
20	Phoenix	269	63

Source: MBA Monitor. Ivan Bofarull, Director of Analytics & Strategy, ESADE Business School

CATALAN UNIVERSITIES IN INTERNATIONAL RANKINGS

QS ranking by Subject (2014)

Catalonia has, in 2 different subjects, **2 universities in the Top 50**:

- Universitat Politècnica de Catalunya (36) in Engineering – Civil & Structural.
- Universitat Pompeu Fabra (40) in Economics & Econometrics.

Catalonia represents 1.5% of European population and has 6% of top 100 young universities

4 universities in world's top 100 for at least one subject:

- **Universitat de Barcelona** in 11 of the 30 subjects.
- **Universitat Autònoma de Barcelona** in 3 subjects.
- **Universitat Politècnica de Catalunya** in 2 subjects.
- **Universitat Pompeu Fabra** in 1 subject.

In Spain, Catalan universities are the **top institutions** in **18** of the 30 subjects.

ARWU (Top 500), QS (Top 700) and THE (Top 400) rankings

Now: 2 universities in the top 200.

Our goal: 3 universities in the Top 100

	ARWU (Top 500)				THE (Top 400)				QS (Top 700)			
	2013	2012	2011	2010	2013	2012	2011	2010	2013	2012	2011	2010
UB	201-300	201-300	201-300	201-300	226-250	201-225	201-225	142	178	187	176	148
UAB	201-300	301-400	301-400	301-400	226-250	201-225	201-225		177	176	194	173
UPC							351-400		345	350	373	
UPF	301-400	401-500	401-500	301-400	164	201-225	186	155	281	266	308	336
URV					351-400							

“Young universities” ranking

	Times Higher Education (100 under 50)	QS (50 under 50)
	Year 2014	Year 2013
UAB	23	11
UPC	95	
UPF	13	25
URV	66	

Catalan Universities outstand in the Spanish ranking of scientific production

The “I-UGR Ranking” 2013

- This ranking synthesises six bibliometric indicators (production and impact) of scientific production in Universities
- Source for the ranking: Thomson-Reuters (former ISI) Web of Science and Journal Citation Reports databases.

http://sci2s.ugr.es/rankinguniversidades/downloads/rankingsI-UGR_Posiciones%202013.pdf

COURSES 2008-2012	1st position	2nd position	3rd position
Mathematics		UPC	
Physics		UB	
Chemistry and Chemical Engineering	UB		
Biological Sciences	UB	UAB	
Medicine and Pharmacy	UB	UAB	
Earth and Environmental Sciences	UB	UAB	
Agrofood Sciences		UAB	UB
Engineering	UPC	UB	
Information and Communication Technologies		UPC	
Psicology and Education	UB		
Economy, Enterprises and Business		UPF	UAB
Other Social Sciences	UB	URV	UAB



STUDY IN CATALONIA



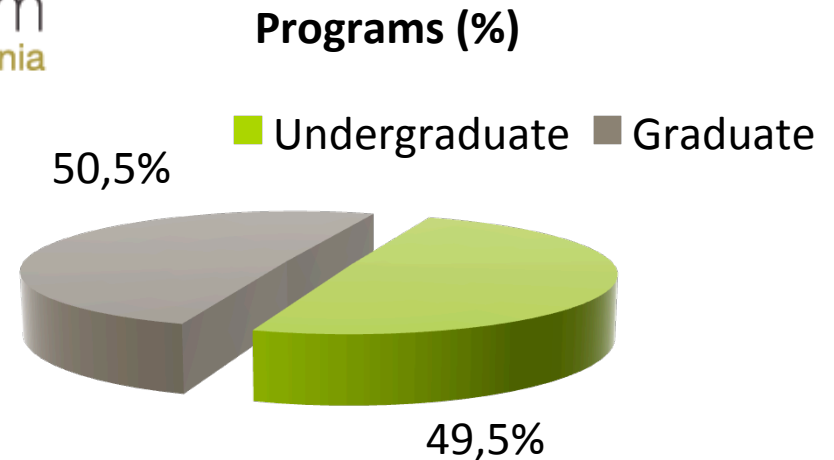
Generalitat de Catalunya
Government
of Catalonia

AROUND 1,000 PROGRAMS AVAILABLE



Studyincatalonia.com
Welcome to the University of Catalonia

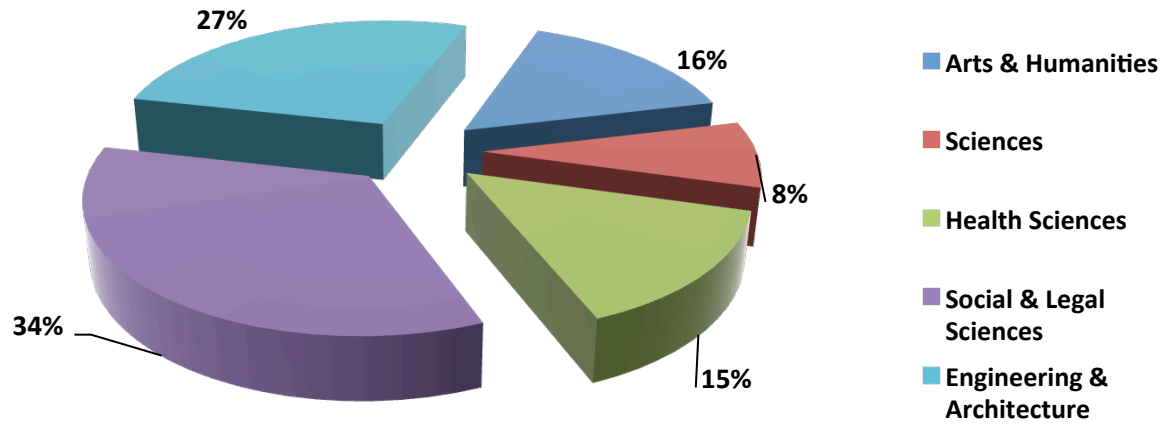
 **Generalitat de Catalunya**
Government of Catalonia



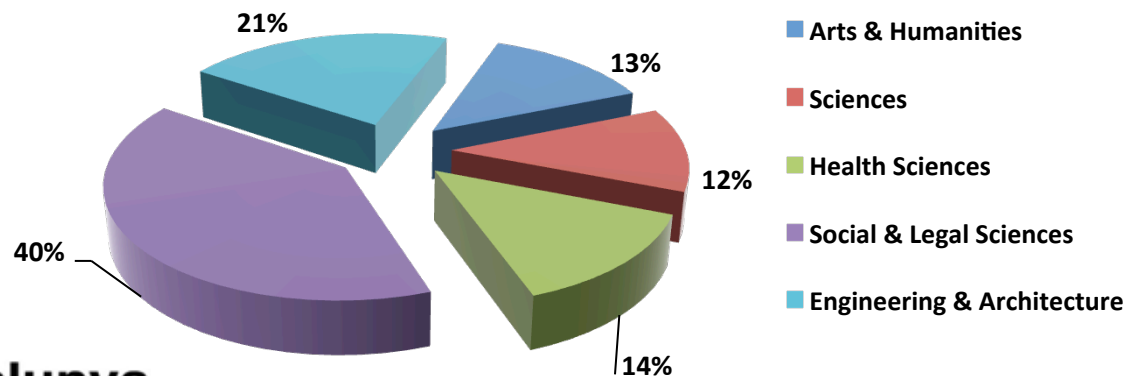
- European standards: all programs adapted to the Bologna process (ECTS).
- Officially recognized thorough Europe.
- Full range of disciplines; diversity.
- Adapted to business needs and labour market.
- Personalized educational experience.

AROUND 1,000 PROGRAMS AVAILABLE

DEGREE PROGRAMS BY STUDY AREA



MASTER PROGRAMS BY STUDY AREA



*Source: Ministry of Economy and Knowledge. Year 2012-2013



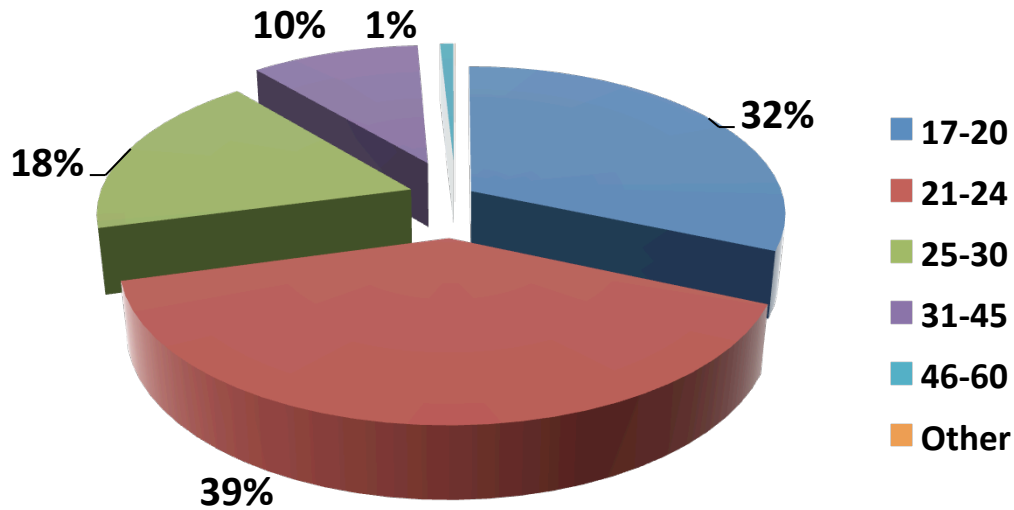
INTERNATIONAL STUDENTS IN THE CATALAN HIGHER EDUCATION SYSTEM

- > **9,474 undergraduate students** are international students (4.4% of total students)
- > **5,953 master students** are international students (28.6% of total students)
- > **5,223 doctorate students** are international students (35.9% of total students)

*Source: University and Research Information System of Catalonia (UNEIX) – (2012-2013) Public and private universities

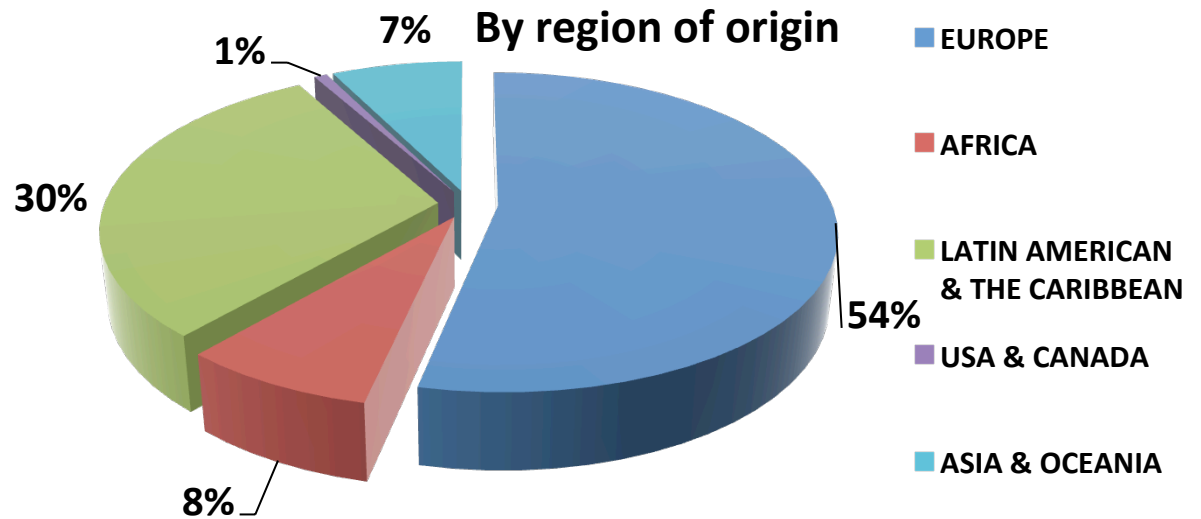
FOREIGN UNDERGRADUATE STUDENTS IN CATALONIA MAIN COUNTRIES

By age



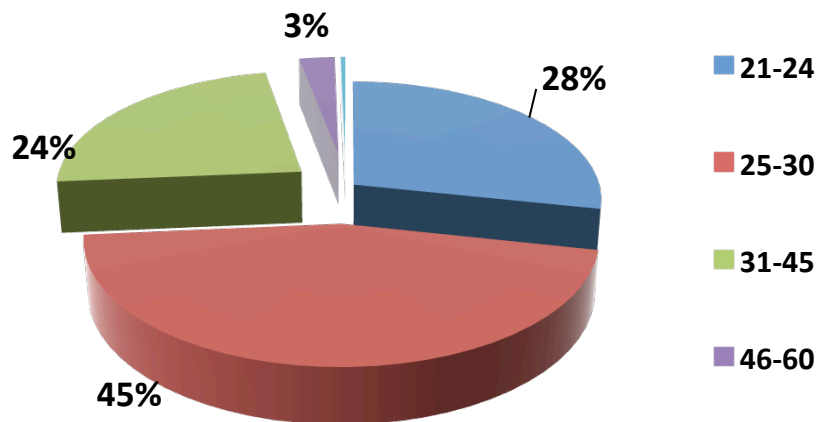
*Source: University and Research Information System of Catalonia (UNEIX) – (2012-2013) Public and private universities

By region of origin

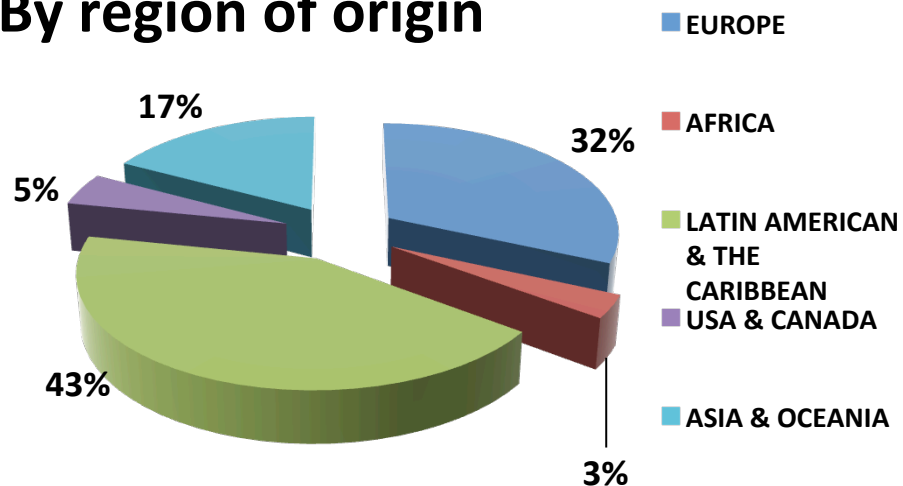


MASTER STUDENTS IN CATALONIA

By age



By region of origin

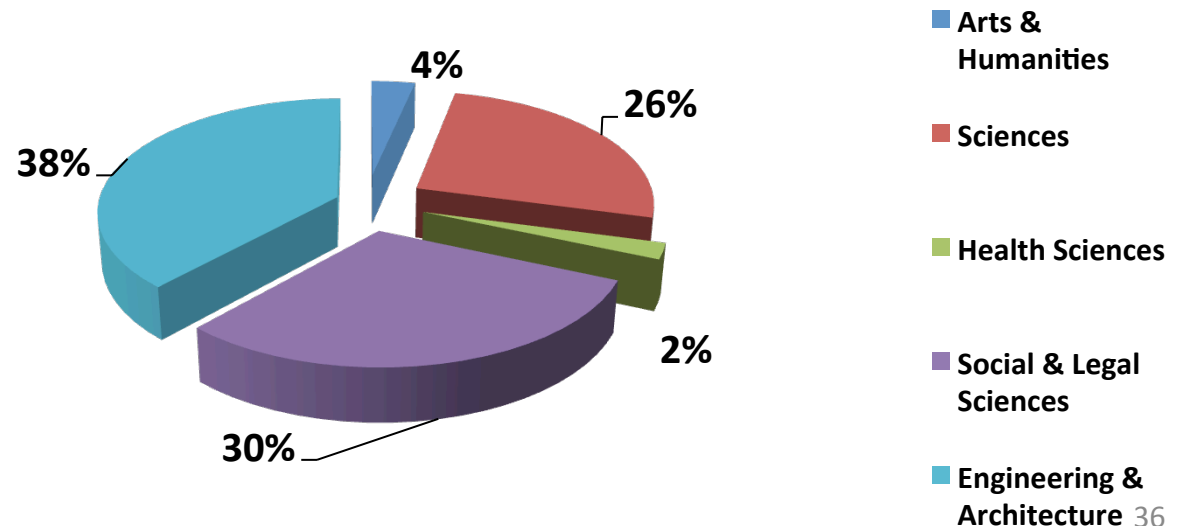


*Source: University and Research Information System of Catalonia (UNEIX) – (2012-2013)
Public and private universities

INTERNATIONAL ACADEMIC OFFER IS INCREASING IN 2013/2014

- 3 bachelor degrees taught totally or significantly in English
- 89 master degrees taught totally or significantly in English
- Lacking full bachelor degrees in collaboration with foreign universities (many collaboration agreements interchanging students)
- 33 master degrees offered in collaboration with foreign universities

MASTERS TAUGHT IN ENGLISH BY STUDY AREA



*Source: Ministry of Economy and Knowledge. Year 2013-2014

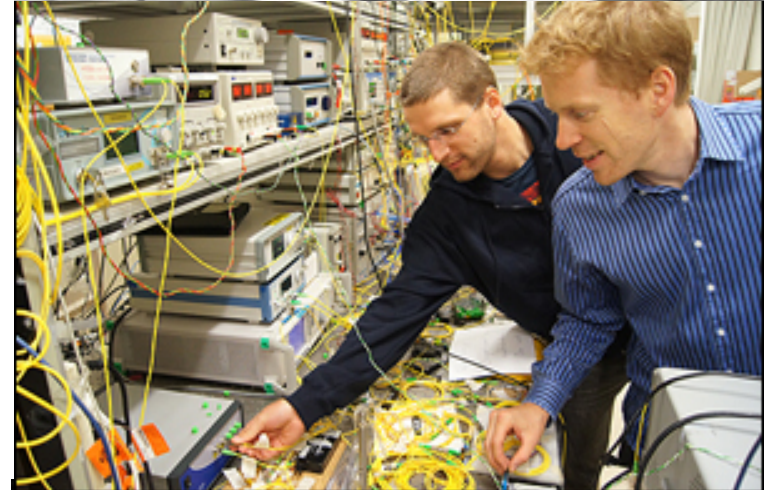
ERASMUS PROGRAM, 25 YEARS

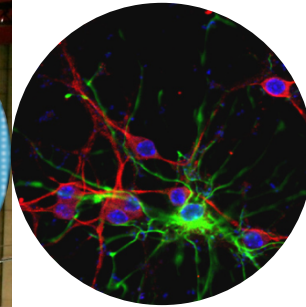
- Two and a half million university studies exchange programs since 1987 in Europe.
- Last year reached a record 231,000 students and 460 M € budget.
- Spain is the top State sending students abroad (36,183) and one of the top receivers 37,432 (16% of total).
- Among destinations, UAB ranks 10th and UB 13th of universities participating in the program



Universities as economic drivers

- The Government activates policies oriented to:
 - Enhance employability of graduated and masters
 - Integrate the development of entrepreneurial skills in the training programs
 - Industrial PhDs
 - Academy – Industry exchange of professors and professionals
 - Foster the creation of Tech-based companies
 - Universities becoming strategic partners innovation processes
 - Shared system of tech and knowledge promotion and transfer





**EXCELLENCE IN
R&D:
OUTSTANDING
AMONG THE BEST**



Generalitat de Catalunya
Government
of Catalonia

July 2008



Nature:
“Barcelona is emerging as a Mediterranean knowledge hub”

April 2010

“In particular Catalonia has done very well”

March Helga Nowotny, President of the ERC

She is the president of the European Research Council (ERC). Helga Nowotny is a distinguished scholar in science studies. Her impeccable academic work, her sensitivity to issues concerning the relationship between science and society and her profound knowledge of the European research landscape has turned her into a much sought after advisor in science policies. In particular after retiring from her chair from the Swiss Federal Institute of Technology in Zurich in 2002 she has become more and more involved in shaping the research policy of the European Union.

Global Talents - Helga Nowotny (president of ERC at the moment): «In particular, Catalonia has done very well»



Ciència a la catalana

ANÀLISI

Josep Corbella



Hi ha una cosa que diferencia Catalunya de la resta d'Espanya més que el pa amb tomàquet, l'afició per la botifarra respecte al mus o la rivalitat Barça-Madrid. És l'actitud davant la ciència.

Ara ho veureu. Mentre que Catalunya impulsa els contractes Icrea per fixar bons investigadors i pagar-los segons els mèrits, Espanya ha aprovat una llei de la Ciència que perpetua la figura del científic funcionari. Mentre que a Cata-

lunya la recerca d'excel·lència s'ha convertit en norma als centres d'investigació, a la resta d'Espanya continua sent excepció. I mentre que a Catalunya la Generalitat continua donant suport a la bona ciència malgrat la crisi, a Madrid el Govern del PP retalla un 25% el pressupost en R+D+I d'un any per a l'altre.

Després de la fractura científica entre Catalunya i la resta d'Espanya, s'intueixen diferències culturals més profundes. La cultura meritocràtica que predomina als centres d'investigació catalans, el valor que es dona a l'esforç, remet a l'ètica del calvinisme. La cultura més igualitària que predomina a la

resta d'Espanya remet més als valors del catolicisme. No hi vegeu, en això, un judici de valor. Només és una explicació de com s'ha arribat fins aquí.

Hi ha una diferència profunda entre l'actitud de Catalunya i la de la resta d'Espanya davant la investigació

I les fronteres no són nítides. Hi ha grups d'investigació excel·lents a Madrid, Oviedo o Alacant. I hi ha grups d'investigació mediocres a Catalunya.

Però el que val més és el que tens al capdamunt. És el que tens a ser, en síntesi, que Catalunya és la catalana.

No està clar si ho podrà fer. La funció de la Generalitat en els últims anys ha estat contractar els investigadors i els millors vehicles (els centres d'investigació) i anar a Madrid a buscar la gasolina (els diners per investigar). Si Madrid talla el subministrament de gasolina? “Només hi ha una direcció possible: sentenciar Massagut. Cal continuar per l'excel·lència”.

La Vanguardia - Josep Corbella: «There's a major difference between Spain's and Catalonia's attitudes towards Science»

May 2012

International recognition

27/1/2014

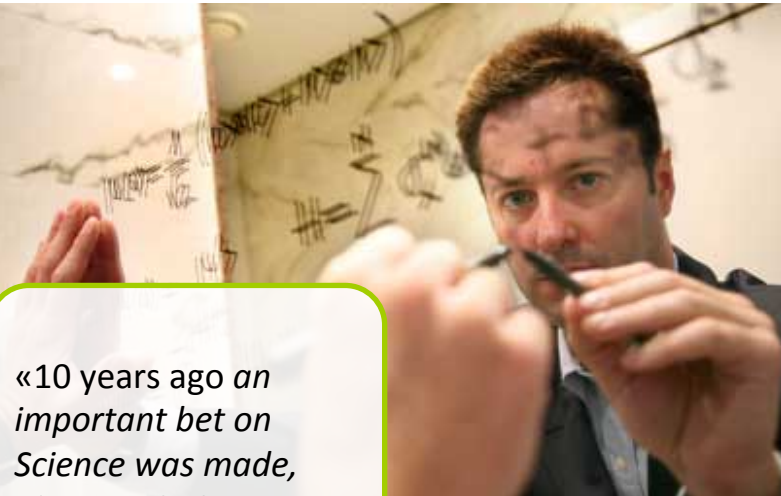
Elías Campo, National Research Awardee 2013

«I thank, on behalf of future generations, Catalonia's bet on Science»



Joan Massagué (Director MSKCC, NY)
Ara TV Interview, 11/01/14):

«The Government has behaved in a normal way, protecting at the most and tuning quality at its best»



«10 years ago an important bet on Science was made, along with the investment needed. Now, catalan research is well ahead the Spanish»

Juan Ignacio Cirac (Inst. Max Plank, Munich,
October 2011, 324.cat:

«Regarding research, you guys do well»

La Contra, La Vanguardia BEN LEHNER,
Nationa Research Award 2012, Young Talent



Tinc 33 anys iestic accelerant, perquè la investigació és una piràmide: o ascendeixes o et fan fora. Vaig néixer a Oxford, em vaig doctorar a Cambridge i sóc investigador Icrea del Centre de Regulació Genòmica de Barcelona, que avui atreu talent. Col·laboro amb el CosmoCaixa

“Vostès aquí fan moltes coses bé en investigació”



Això ho hem fet bé
No tot sabem fer-ho malament. I Lehner n'és testimoni: investiga aquí no perquè sigui català o espanyol, sinó perquè és el millor. Això ho hem fet bé. I també fixar-lo quan era un jove investigador desconegut i no ara, que ja és referent mundial en genètica de sistemes. I a més, es

“Building the best science...”
requires:

“**funding**”: Steady increase
of investment and resources

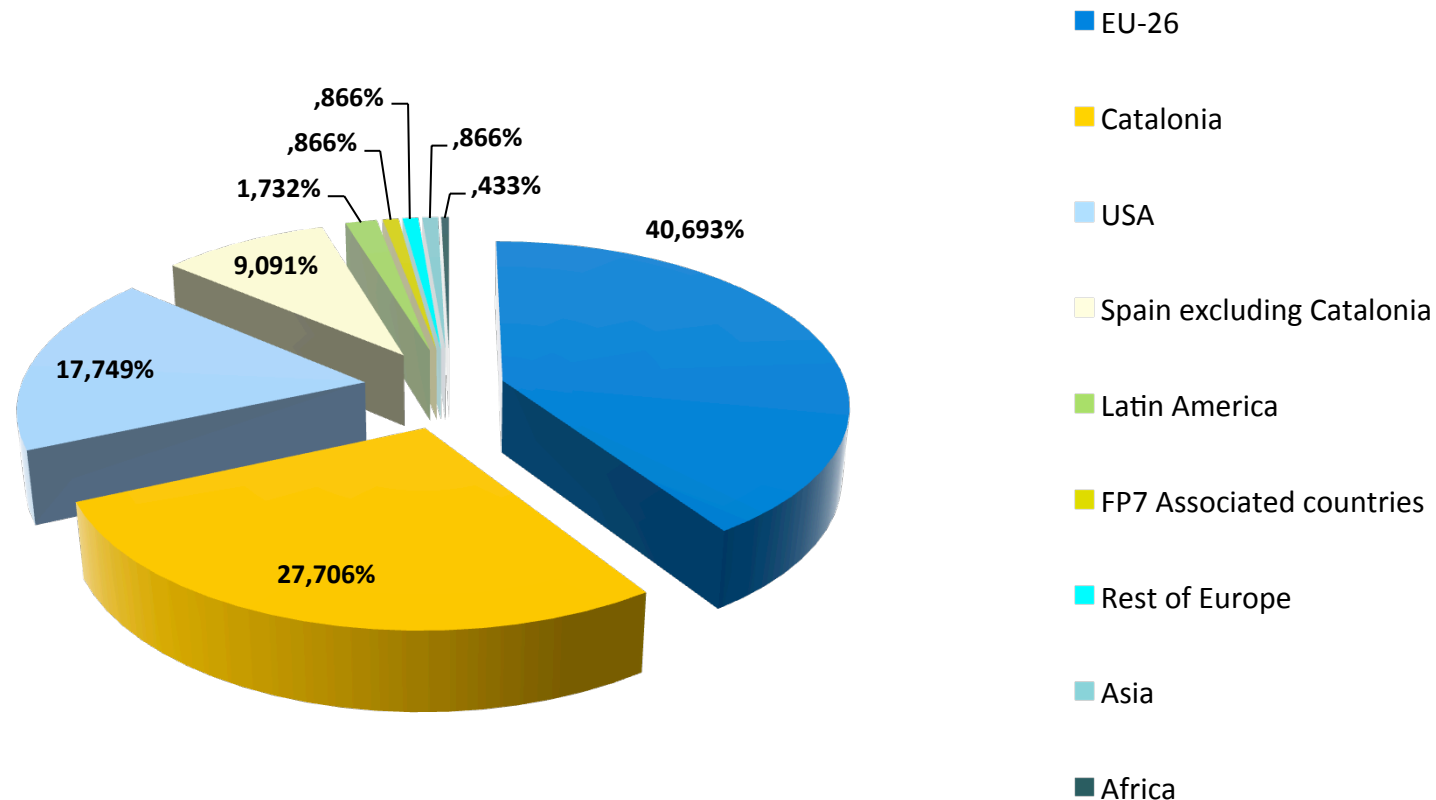
“**freedom**”: Flexibility
(governance, independency of
research centres, ICREA model
of hiring HR)

“**lifestyle**”: quality of life
and an attractive environment



Source: «Science and the cities», Nature Specials 467, 906-908, 20/10/2010

ICREA Program of international talent recruitment, with private hiring formulae



More than 40% of the 235 researchers hired by ICREA in the past 10 years come from EU centers, and 20% come from USA centers (more than from Catalonia and the rest of Spain, respectively).

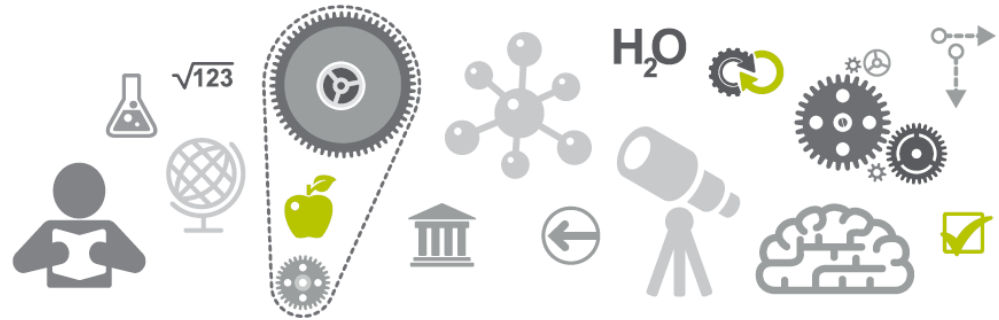
Source: DGR from ICREA data 2012.

Industrial PhDs

- Each industrial PhD must have a number of companies "engaged" (cluster) with the objectives and the dynamics of the program.
- Company and university define the research project to be developed by the student.
- The industrial PhD student passes 100% of his/her time on research activities (distributed between the company and the university).
- The company hires the student for a 3 year period the industrial PhD student with a Master's or second cycle level degree. The starting salary will not be less than € 22,000 gross per year.
- The company receives a public subsidy equivalent to 50% of the total cost (salary and training costs).
- Nowadays there are: **79 industrial doctorate projects, 79 industrial PhD students and 62 different companies got involved.**



INDUSTRIAL
DOCTORATES
PLAN



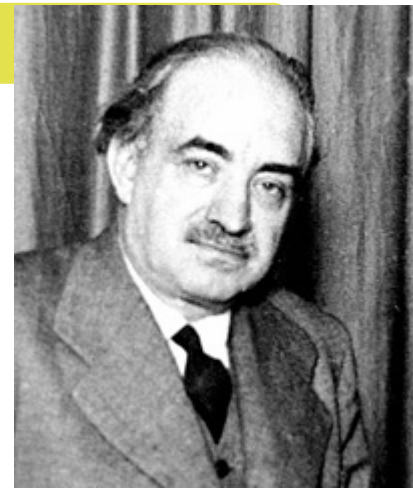
[Driver of knowledge]

PROGRAMME AIMED AT **COMPANIES**
INTERESTED IN PROMOTING RESEARCH,
DEVELOPMENT AND INNOVATION PROJECTS

Goal: 100 thesis / year in this program

Serra Hunter Program

- Plan Serra Hunter facilitate the creation of a Catalan own university faculty system.
- Over the next 10 years will retire 2,000 teachers and 1,000 permanent and will be incorporated also permanent.
- The SUR is devoted € 10 million this year. The Government will fund half the cost of each contract and half of variable remuneration.
- The uniqueness lies in the selection of teachers, it will be a hearing in which the government who participate will select teachers Serra Hunter, and introduces the possibility of increasing the salaries of certain teachers for their high level of excellence.



Jaume Serra Hunter



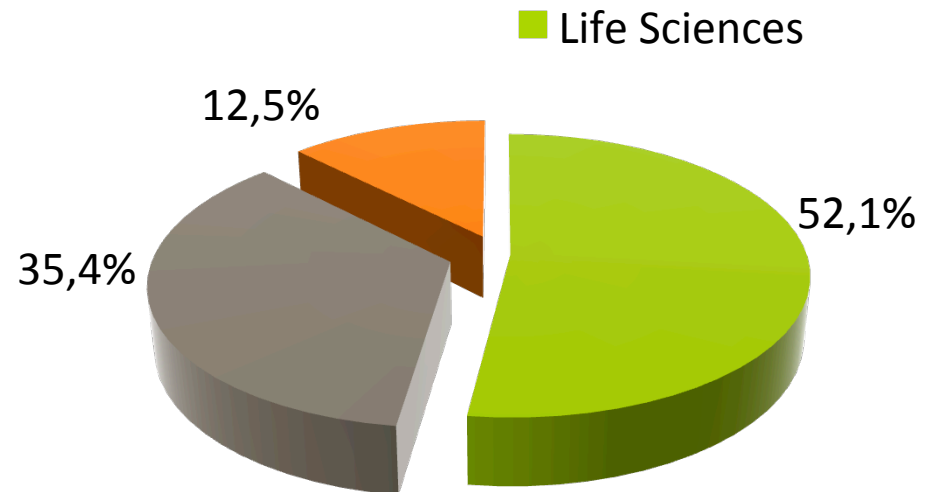
CERCA CENTERS: 47 research organizations of excellence.

Features:

- Flexible governance
- Internationalization
- Ambition of Excellence
- Location at university campuses
- International Talent recruitment
- Private hiring formula
- Administration participates at

Governing bodies

- International Scientific Advisory Boards
- Periodic evaluation of performance and mission, according to international standards



Classification according to ERC. Life Sciences include Health sciences.

Source: DGR from ICERCA data 2013

The CERCA centers are currently undergoing bottom-up processes of alliances and fusions to gain critical mass and increase competitiveness

LARGE FACILITIES

ALBA

A new generation Synchrotron: 9 lines functioning, first international call successfully launched

CNAG (National Center for Genomic Analysis):

CNAG can currently sequence 250 Gb per day (250,000,000,000 bases) and generate a complete human genome at 30-fold coverage in less than one day (Operations started on March 2010)

BSC (Barcelona Supercomputing Center):

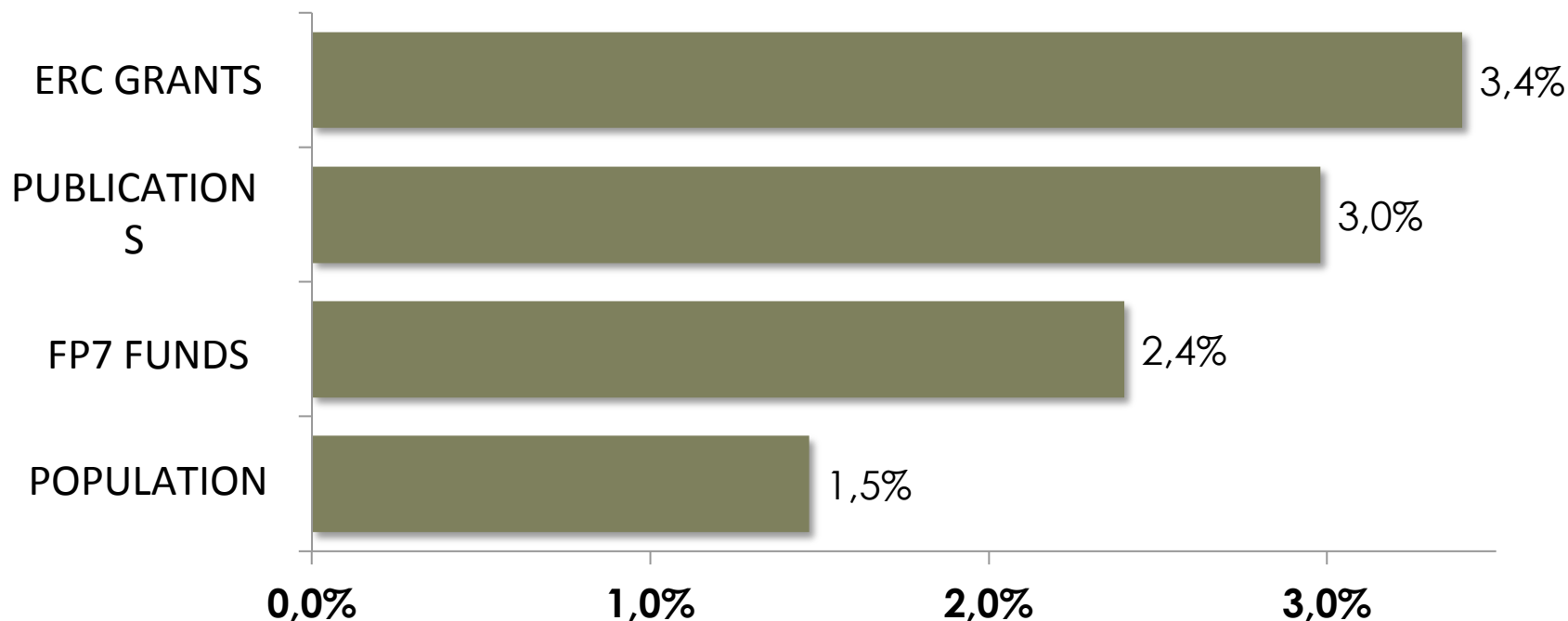
BSC-CNS manages *Mare Nostrum*, one of the most powerful supercomputers in Europe, located inside an old chapel. BSC participates in the EU project PRACE



INTERNATIONAL POSITION: RESEARCH FIGURES

50% to 100% over the expected per population

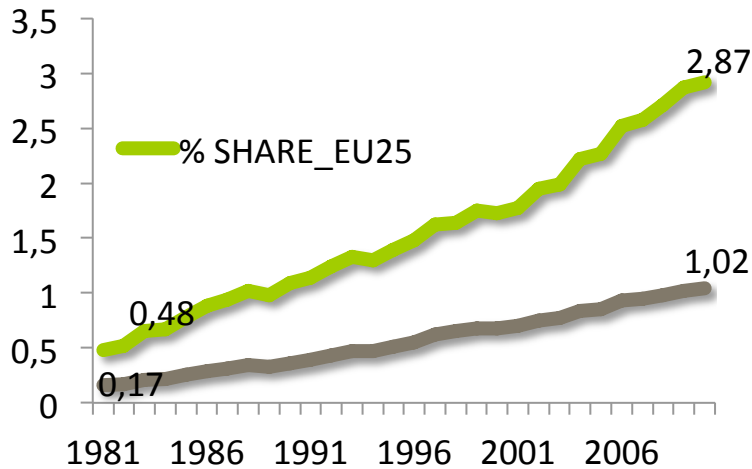
With 1.5% of the European population, Catalonia publishes 3% of papers, and obtains 2.4 % of FP7 competitive funds and 3.4 % of European Research Council's grants



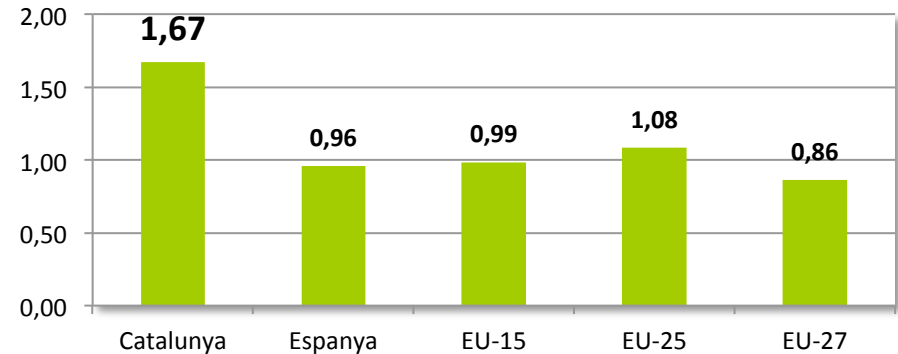
Catalan indicators: ratio as percentage of European values. Population, GDP and ERC calls: EU-27; Scientific publications: EU-25; 7th Framework Program: FP7 area; Sources: General Directorate of Research from data APSCIT, CDTI, Idescat, INE, Eurostat and ERC; Publications: Source: Mendez, R.; Suñen, E. i Rovira, L.: National Science Indicators 2009

INTERNATIONAL SHARE OF SCIENTIFIC PUBLICATIONS

- ✓ With 0.1% of world's population Catalonia publishes 1% of papers



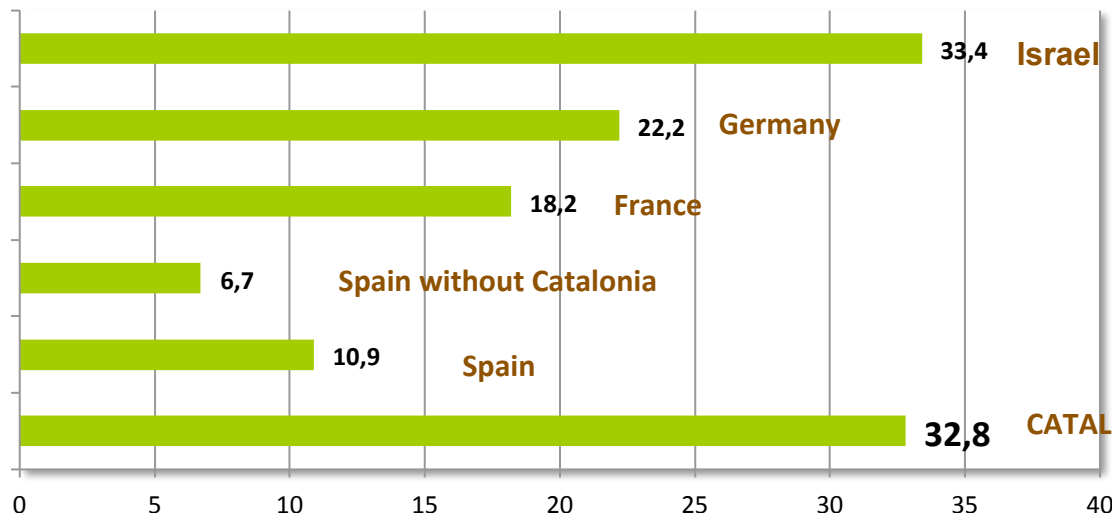
Published papers (2009)/ 1000 inhabitants



- ✓ Catalonia has doubled in 5 years (2004-2009) the number of authors publishing in impact journals.
- ✓ The HCP number has increased 80% in these five years

- ✓ Papers signed in *Nature* and *Science* by scientists in Catalonia are the 4th most cited in the world in these publications (2.68 citations), only after South Korea (3.41), Russia (2.84) and Finland (2.69). (source: comunicacio21.cat)

Publications in Science and Nature (2008-2012) / million inhabitants



- ✓ Researchers working in Catalonia publish at levels comparable to those of the European leading countries

Source: DGR 2013

Sources: Idescat, Eurostat, Israel Statistic Office

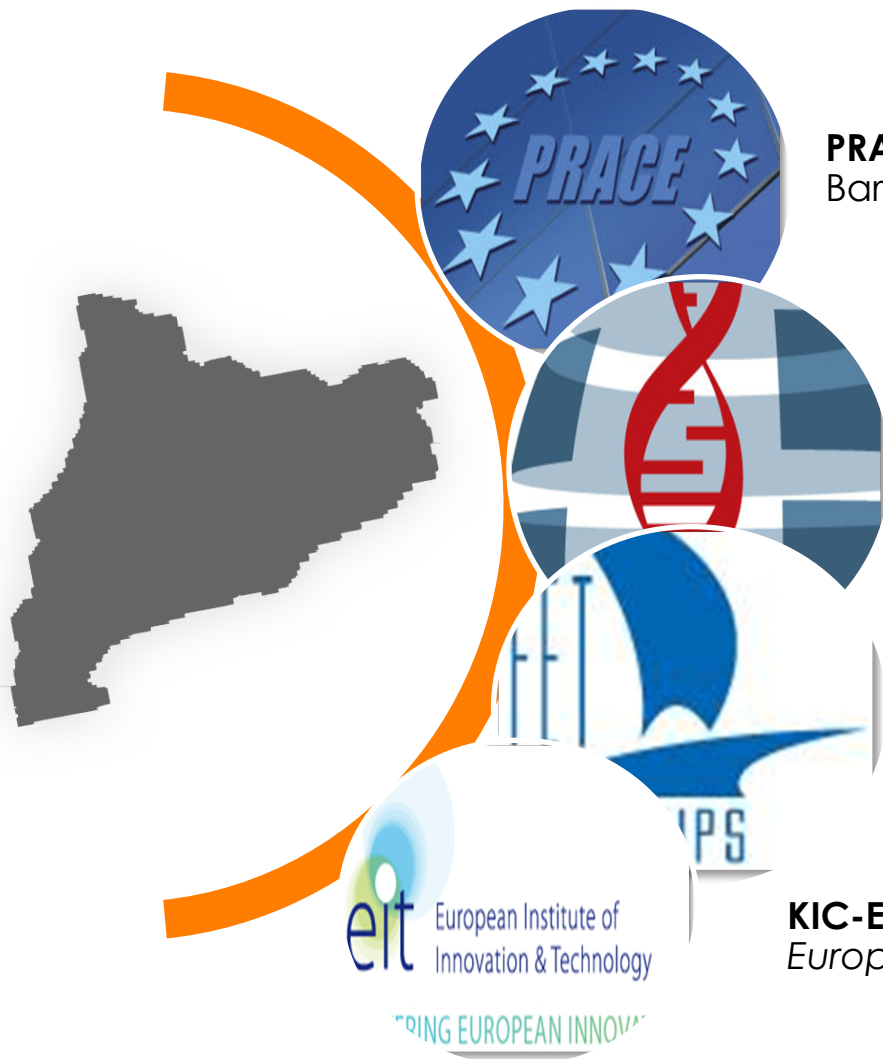
Fonts: (WoS /Thomson-Reuter)

RESEARCH INSTITUTIONS AT THE WORLD RANKINGS

- Max Plank Society's rank of research-focused institutions, based on **Scopus**, publications and citations 2013: The Catalan Institute of Photonic Sciences (**ICFO**) has been placed in the **top position** of research institutions world-wide in the area of Physics
- **Scimago** Report (SIR 2013): The Institute of Chemical Research of Catalonia (**ICIQ**) **leads the Spanish research institutions** ranking of excellence.
- **Nature Publishing Index Global 2012:** More than **50% of the top CSIC** (Spanish Research Council) institutes in this **list are located in Catalonia**, which hosts 15% of the CSIC centres ("ENVIRONMENT" FACTOR)



OPPORTUNITIES: CATALAN RESEARCH GROUPS IN THE MAIN INTERNATIONAL



PRACE (*Partnership for Advanced Computing in Europe*):
Barcelona Supercomputing Centre

INTERNATIONAL CANCER GENOME CONSORTIUM:
National Centre for Genomic Analysis and IDIBAPS

FET FET FLAGSHIPS (*EC initiatives in Future and Emerging technologies*)
THE HUMAN BRAIN
GRAPHENE

KIC-EIT (*Knowledge and Innovation Communities of the European Institute of Innovation and Technology*)

Energy

Main actors

- CIMNE (International Center for Numerical Methods in Engineering)
- IREC (Catalonia Institute for Energy Research)
- IFAE (UAB (Autonomous University of Barcelona)
- UPC (Polytechnics University of Barcelona)

Assets and Opportunities



Campus Diagonal-Besòs

New materials and processes

Main actors

ICFO: The Catalan Institute of Photonic Sciences

ICN2 (Catalan Institute of Nanosciences and Nanotechnologies)

IBEC (Institute for Bioengineering of Catalonia)

ICIQ: Institute of Chemical Research of Catalonia)

UAB (Autonomous University of Barcelona)

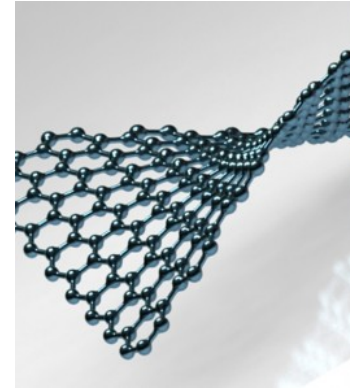
UPC (Polytechnics University of Barcelona)

UB (University of Barcelona)

Synchrotron

Assets and Opportunities

Graphene FET Flagship



“9 Materials That Will Change the Future of Manufacturing”



Biomedicine

Main Actors

- active interaction between hospitals, universities, research centres and industry, in all areas from basic to clinical research.
- 10 (out of 12) universities teaching Life Sciences
- Over 50% of CERCA centres and almost 75% of Research Groups work on Life Sciences.
- Network of 215 hospitals, 13 of which are developing outstanding research. Six are among Spain's top science research producers. Five of them have been quality certified as "Health Research Institutes".

Assets and Opportunities

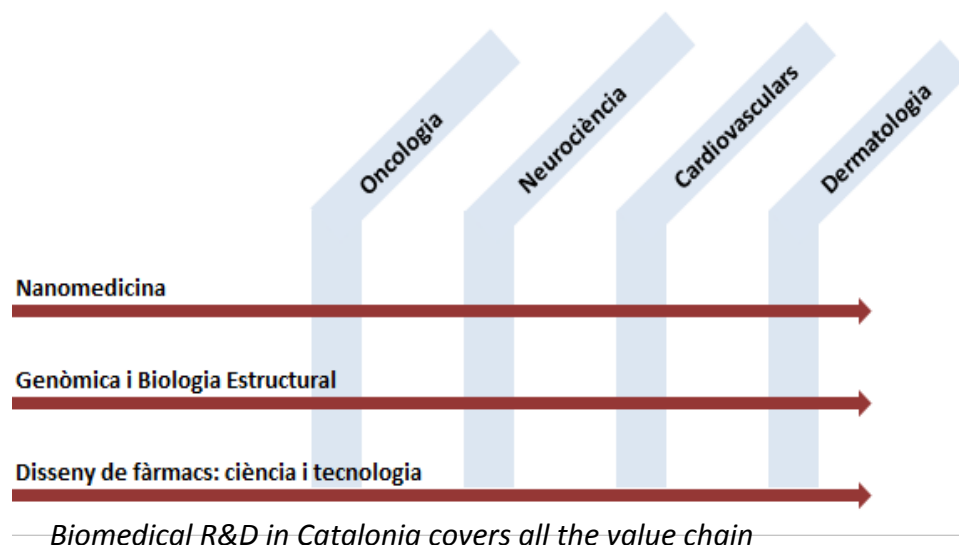
Publications: Biomedicine accounts for 80% of the papers and also 80% of the highly cited (HCP).

ERC: 34% of the 100 grants go to Life Sciences Projects. The most granted centre is CRG, a reference in the field.

Unique projects: Barcelona researchers lead research on Vaccines against global diseases: Malaria (CRESIB), HIV (Hivacat), Tuberculosis (IGTP).

- International Consortium for cancer Genome Sequencing: IDIBAPS - chronic lymphatic leukaemia.

International recognition: Govern UK: "Catalonia boasts a very important life sciences sector"



CALIFORNIA - CATALONIA – OPPORTUNITIES FOR COLLABORATION

	California 2012-2013	Catalonia 2012-2013	California vs Catalonia (<i>normalized values</i>)	
Population	38.3 MP (2013)	7.3 MP (2012)		
GDP per capita	\$ 52,200 (GSP*) (2012)	27,700 € (2012)	\$ 52,200 (GSP*) (2012)	\$ 38,130 (2012)
HE Government transfer (Education & Research)	23,472 M\$ (2013)	1,288 M€ (2011)	\$613/P	\$243/P
Transfer to universities & research centers	12,417 M\$ (2013)	680 M€ (2013) (**)	\$324/P	\$128/P
Transfer to other HE institutions	11,055 M\$	608 M€	\$289/MP	\$115/MP
Universities	33 campus (UC & CSU)	12 7 public + 4 private + 1 open		
Other higher education institutions	112	56 (centers affiliated to univ.)		
Number of students (Public, private and Open)	≈ 683,000 (577,5k undergrad+ 105,5k Master)	≈ 225,000 (204k undergrad+ 21k Master)	17,800/MP (15,000 + 2,800)	30,800/MP (28,000 + 2,900)
Number of graduates (Public, private and Open)	≈ 224,000 (***) (162k undergrad. +62k Master)	≈ 35,300 (25,3k undergrad. + 10k Master)	5,800/MP (4,200 + 1,600)	4,800/MP (3,500 + 1,300)
Number of PhD	≈ 11,600 (***)	≈ 2,100	303/MP	288/MP

(*) GSP = Gross State Product;

(**) Includes block grant to 7 public univ

(***) 2009. Universities + WASC (Western Association of Schools and Colleges)

ACADEMIC EXCHANGES

The image shows a screenshot of a website for the Delegation of the European Union to the United States. At the top, there is a dark blue header with the EU flag logo on the left and social media icons for Facebook, Twitter, YouTube, and LinkedIn on the right, along with the AMBA logo. Below the header, the text "Delegation of the European Union to the United States" is centered. A navigation bar contains four menu items: "WHO WE ARE", "WHAT WE DO", "WHAT YOU CAN DO", and "EVENTS". Below the navigation bar is a breadcrumb trail: "Home > Press & Media > EU News > Erasmus +: Supporting Education and Training in Europe and Beyond". The main heading is "ERASMUS +: SUPPORTING EDUCATION AND TRAINING IN EUROPE AND BEYOND" in large blue letters, with a Facebook icon to its right. Below the heading is a large banner image. The banner features a teal-tinted globe held by two hands. The text "Erasmus+" is written in large white letters across the globe. Below it, the text "The new EU Programme on Education, Training, Youth and Sport" is written in white. In the top right corner of the banner, the logo "I*ES" is displayed, with "INTERNATIONAL EXCH" and "ERASMUS STUDENT NE" written below it.

ACADEMIC EXCHANGES

Erasmus +

- By studying, training, volunteering, and gaining work experience abroad, those who benefit from the opportunities offered by [Erasmus +](#) will gain a distinct advantage in the job market.
- Beginning January 2014, the EU's seven-year, €14.7 (\$19.1) billion program for education, training, youth, and sport, will help participants boost skills and employability. During the life of the program more than 4 million people will receive support to study, train, work, or volunteer abroad, including 2 million higher education students, 650,000 vocational training students and apprentices, and more than 500,000 participants in youth exchanges or volunteer work abroad.
- Erasmus+ will also provide funding for education and training staff, youth workers, and for partnerships between universities, colleges, schools, enterprises, and not-for-profit organizations.

ACADEMIC EXCHANGES



University of California – Irvine. Henry Samueli School of Engineering (HSSoE)

- First year: **1996**
- Program director: **Prof. Roger H. Rangel**
- Area of knowledge: **Engineering**
- Grants awarded until 2013: **127**
- **2014 offer: 8 graduate grants (master & PhD); 2 postdoc grants**
- 2014 cost program: **\$605,875**, funded by:
 - Generalitat de Catalunya (GC): **\$324,875**
 - Balsells Fellowship Fund (BFF): **\$281,000**

THE TEAM (I)

- **Ms. Esther Martra**, director of International Development, UB
- **Mr. David Peguero**, CETT-UB
- **Prof. Mr. Lluís Quintana**, vice rector of International Relations, UAB
- **Ms. Marta Vilalta**, head of the International Relations Area, UAB
- **Mr. Richard Turner**, international programs, UAB
- **Mr. Santiago Alias**, international Marketing Manager, UAB
- **Ms. Helena Martínez**, head of the international Relations Cabinet, UPC
- **Ms. Sara López**, director of international relations, UPF
- **Ms. Lucia Conte**, director of Education Abroad Programs, UPF
- **Ms. Maite Viudes**, head of international relations, Tecnocampus Mataró-UPF
- **Mr. Lluís Mozo Collados**, business development director, ELISAVA, UPF

THE TEAM (II)

- **Prof. Ms. Astrid Ballesta**, vice rector of international relations, UdL
- **Mr. Josep Ma. Martí**, head of the International relations office, UdL
- **Prof. Mr. Jörg Zimmer**, vice rector of international relations, UdG
- **Ms. Laura Ripoll**, head of the international relations office, UdG
- **Ms. Rebeca Tomas**, international center, URV
- **Mr. Joaquim Sánchez-Rex**, head of the international relations office, La Salle, URL
- **Ms. Montse Corrius**, international programs, UVIC
- **Mr. Pere Morera**, international academic coordinator, Faculty of Business and Communication, UVIC
- **Ms. Alícia Vila**, Head of the International Office, UAO
- **Ms. Alicia Betts**, project Manager, Universities of Catalonia, ACUP
- **Ms. Pia Moret**, director of the Inter-university Council Office

OPEN DISCUSSION





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facebook.com/universitatcat

Studyincatalonia.com
Welcome to the University of Catalonia

 **Generalitat de Catalunya**
Government of Catalonia

Thank you very much
for your attention