

Introduction to Biotech Cluster in Catalonia

*SUPER-SME Peer-review meeting
Barcelona, 23rd July 2007*



Introduction to the Catalan Biocluster

- ✓ Catalonia and Europe: towards a Biocluster South
- ✓ PRI 2005 – 2008
- ✓ Universities
- ✓ Hospitals
- ✓ Science Parks
- ✓ Companies
- ✓ Opportunities and weaknesses



Catalonia: location and economic figures



- ✓ Catalonia is strategically located
- ✓ Total area: 32.114 km² (6.3% of Spanish total territory)
- ✓ Population of more than 6 million, 4 million in the Barcelona region
- ✓ Provides 25% of Spanish industrial employment and 26% of the country's industrial GDP



European Bioclusters and Catalonia

- 2nd level Biocluster
- 1st level Biocluster
- ✓ Munich
- ✓ Berlin
- ✓ Paris, Lyon-Grenoble
- ✓ Stockholm – Uppsala
- ✓ London
- ✓ Oxford – Cambridge
- ✓ Basilea -Zurich

Catalonia
Barcelona

CIDEM Centre d'Innovació i Desenvolupament Empresarial
TRANSBIO
Generalitat de Catalunya

Research and Innovation Plan (2005 – 2008)

MISSION

To position Catalonia among the leading research and innovation countries in Europe by means of:

- ✓ integrated public policy
- ✓ development of a knowledge based society
- ✓ development of entrepreneurship
- ✓ sustainable economic development

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Research and Innovation Plan (2005 – 2008)

Priority research lines:

- ✓ Biomedical and health
- ✓ IT
- ✓ Agro-food science
- ✓ Social and cultural development
- ✓ Sustainable development and protecting environment

Budget:
860 M€

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Biotech in Catalonia: some figures

- ✓ 11 universities, 11 science parks, 3 biomedical and 3 agro-food (20,000 scientists, 200 research groups in life sciences)
- ✓ Network of Catalan hospitals, among which 6 of Spanish top ranking hospitals
- ✓ Technological Springboards
- ✓ Network of Technology Platforms (genomics, proteomics, crystallography, nanotech, NMR, combinatorial chemistry, fine chemistry, microPET)
- ✓ IBM – UPC Supercomputer Centre MareNostrum
- ✓ New Synchrotron Light Source
- ✓ Clinical trials: 1,844 centres involved; 4,000 researchers; 1,264 trials (2002)



Spanish Universities and CSIC (biomedical & life sciences), 1994-2002

Spanish Universities	Docs (citations)
Universitat de Barcelona	6.872 (66.084)
Univ. Complutense Madrid	5.221 (41.676)
Univ. Autònoma Madrid	4.800 (55.242)
Univ. Autònoma Barcelona	3.570 (28.389)
Universitat de Valencia	3.523 (25.061)
Univ. Santiago Compostela	2.198 (12.867)
CBM-CSIC	1.512 (24.632)
CIB-CSIC	1.019 (12.558)
CNB-CSIC	992 (18.057)
CID-CSIC	703 (9.717)
IIBB-CSIC	291 (3.484)

J. CAMI, E. SUÑEN-PINOL, R. MENDEZ-VÁSQUEZ,
MED CLIN (Barc) 2005; 124, 93-1001.



Catalan network of hospitals

Data within the period 1994-2002:

- ✓ H. Clínic,
 - ✓ H. Vall d'Hebron,
 - ✓ H. Sant Pau,
 - ✓ H. Bellvitge,
 - ✓ IMIM-H. Mar,
 - ✓ H.G. Trias i Pujol
- } 81,2% of the scientific production
85,2% of the citation of the whole health system
49% of the whole biomedical scientific



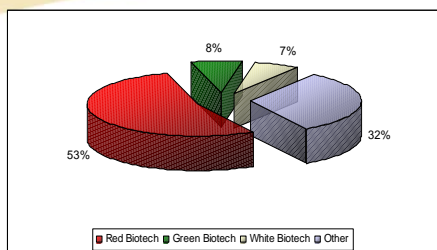
Science parks: XPCAT network

Biomedical scientific parks:

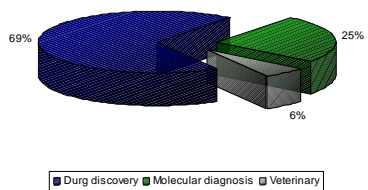
- ✓ Scientific Park of Barcelona
- ✓ Scientific and Agro food technological Park of Lleida
- ✓ Biomedical Research Park of Barcelona (PRBB)
- ✓ Research Park of UAB



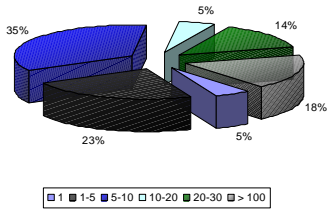
Biotech companies: spin-offs and SMEs



Biotech companies: market field



Biotech companies: number of workers

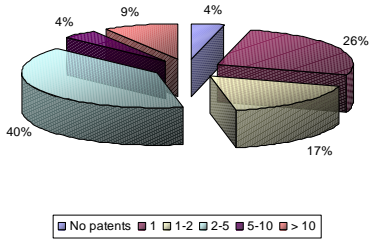


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Biotech companies: patents



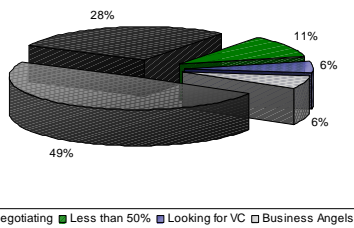
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Catalan biotech companies and venture capital

Few venture capital firms which invested 18.76 M€ in 2000-2002



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Top ranking of Catalan Biotech companies

✓ **Biotech sector:** it is small but growing sector, 150 companies in Spain, of which 40 located in Catalonia.

✓ **Some biotech companies located in Catalonia**

AB Biotics	Genmedica
Activery Biotech	Haltisform
Advancell	IBQ
Biocontrol technologies	Kymos
BioKit	Lipotec
Crystax Pharmaceutical	Mellitus
Diver drugs	Oleoyl Estrone Dev. (OED)
E-biointel	Oryzon genomics
Enantia	Transtechics
ERA-Plantech	Univet



Pharmaceutical and biomedical sector

✓ **Pharmaceutical sector:** 46% of the pharmaceutical companies in Spain are located in Catalonia, and they provide the 60% of the production. 17 are national and 10 multinational. Regarding the size:

- 23% < 250 employees
- 35% between 250 and 500 employees
- 25% between 500 and 1000 employees
- 17% > 1000 employees

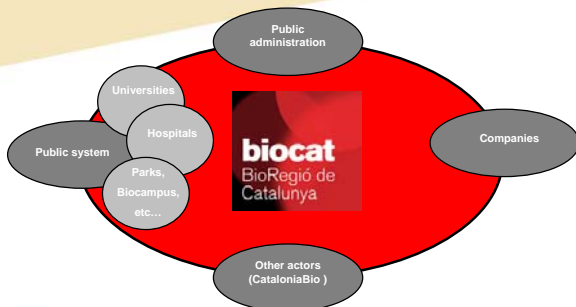
✓ **National pharmaceutical companies located in Catalonia**

- Almirall Prodesfarma
- Bioibérica
- Corporació Uriach
- Corporació Medichem
- Farma-Lepori
- Grup Ferrer
- Grup Vita
- Kern Pharma
- Lab. Esteve
- Lab. Gelos
- Lab. Menarini
- Lab. Reig Jofré
- Lab. Rubió
- Lab. Salvat
- Lab. Viñas
- Lacer
- Probitas Pharma

✓ **Multinational pharmaceutical companies located in Catalonia:** Boehringer Ingelheim, Merck Group, Novartis, Sanofi-Synthelabo, Zambon, Pfizer, Pharmacia, Aventis, Roche and others...



Catalan Bioregion



Catalonia: opportunities

- ✓ Catalonia counts on a leader pharmaceutical sector
- ✓ Strong scientific and technological base the Biomedical sector
- ✓ Opportunities to attract talents and avoid the "brain drain"
- ✓ Business schools of international level
- ✓ Growing attention by the financial community
- ✓ Catalonia / Barcelona: brand image
- ✓ Politic support: Bioregion and Ingenio-2010



Catalonia: weaknesses

- ✓ Lack of entrepreneurial culture and of successful examples of company creation
- ✓ Lack of critical mass (companies based on technology)
- ✓ Venture Capital
- ✓ Lack of bio incubators (management of all the phases)
- ✓ Lack of flexibility from the public administration (incentives, grants, loans, taxes...)
- ✓ Need to attract multinationals with a strong well established R&D



Links and sources of information

PRI

<http://www.gencat.net/pricatalunya>

XPCAT

<http://crater.salleurl.edu/xpcat/main.aspx>

CataloniaBIO

<http://www.cataloniabio.org>

TRANSBIO

<http://www.transbio.net>

Bioregion

<http://www.bioregiocat.net>

CIDEM

<http://www.cidem.com>



Thank you very much!