

18 December 2012

Statistics on Biotechnology Use
Year 2011. *Final results*

- Internal expenditure on Biotechnology-related R&D activities decreases 4.4% as compared with 2010. In the Business sector, the decrease is 5.3% and in the others sectors (Public Administration, Higher education and Private Non-Profit Institutions) is 3.8%.
- The total number of persons dedicated to internal Biotechnology R&D activities, on a full-time equivalent, increases 1.3%. This figure amounts to 11.3% of the total personnel employed in internal R&D activities and 1.3 per thousand of the population employed.
- The Autonomous Communities that register the greatest internal expenditure on Biotechnology R&D in 2010 are Cataluña (28.6%), Comunidad de Madrid (27.9%) and Andalucía (10.5%).

Internal expenditure on Biotechnology-related R&D activities

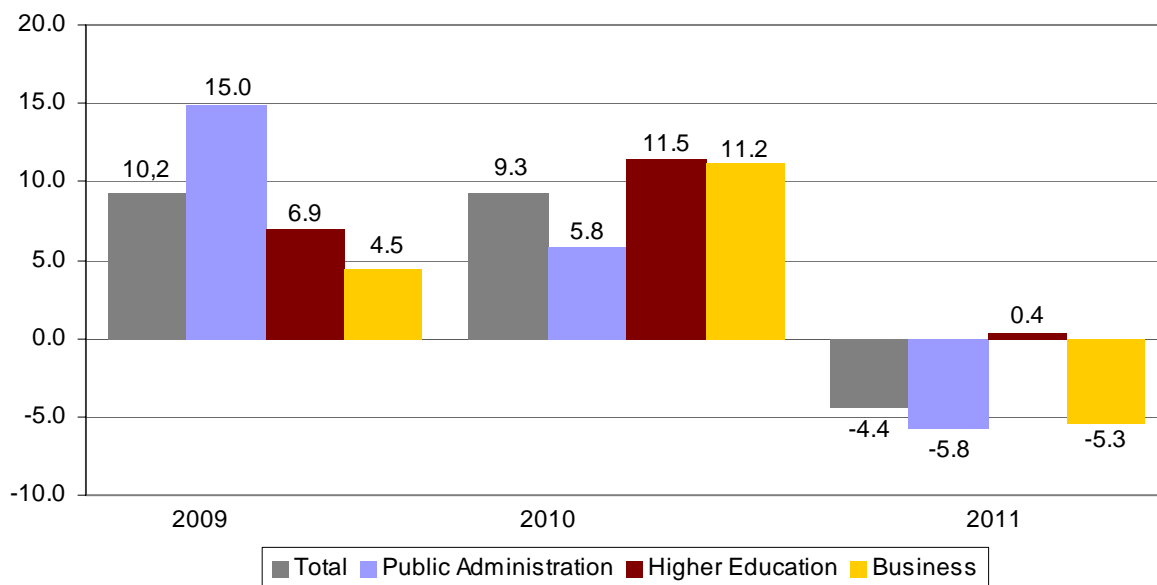
Internal expenditure on Biotechnology-related R&D activities reached 1,504 million euros in the year 2011, accounting for 10.6% of total internal expenditure on R&D activities, and a 4.4% decrease, as compared with 2010.

By sector of operation, the Public Administration presented the highest percentage over total internal expenditure on Biotechnology R&D activities (40.3%), followed by the Business sector (35.8%) and Higher education (23.7%).

The business sector experienced a 5.3% decrease in internal expenditure on Biotechnology-related R&D activities in 2011. Moreover, the number of companies with internal Biotechnology R&D activities registered an increase of 7.5%.

In turn, in the Public Administration, internal expenditure on Biotechnology R&D drop 5.8%, whereas increased 0.4% in Higher education.

Variation of internal expenditure on Biotechnology R&D (%)



Internal Biotechnology-related R&D activities in 2011 were mainly financed by the Public Administration (52.5%) and the private sector (33.5%). Funds from foreign sources (8.3%), from Higher education (4.5%) and from Private Non-Profit Institutions (1.2%) financed the rest.

Internal expenditure on Biotechnology R&D by sector and source of funds. 2011

Thousand of euros

Sector	Total	Source of funds (%)				
		Public Adm	Higher Education	Business	PNPI	Abroad
TOTAL	1,504,219	52.5	4.5	33.5	1.2	8.3
Public Administration	606,251	76.6	0.5	17.5	1.1	4.3
Higher Education	356,451	62.2	18.0	11.2	1.2	7.4
Business	537,883	19.1	0.0	66.3	1.1	13.4
PNPI	3,633	11.8	0.7	45.5	39.0	2.9

Employment in internal Biotechnology-related R&D activities

The total number of persons dedicated to internal Biotechnology R&D activities, on a full-time equivalent, increased 1.3% in 2011, reaching 24,299.2. This figure amounted to 11.3% of the total personnel employed in R&D activities and 1.3 per thousand of the population employed.

The group of researchers in internal Biotechnology R&D activities reached the figure of 15,346.2 persons on a full-time equivalent (0.8 per thousand of the population employed), 0.7% less than in 2010.

56.9% of personnel were women. The highest percentages of female participation were recorded in Private Non-Profit Institutions (67.3%) and in the Public Administration (60.9%).

Personnel employed in internal Biotechnology R&D activities, by field of operation, according to occupation and sex. Year 2011

On a full-time equivalent

Field of operation	Total personnel			Researchers		
	Total	Variation (%) 11/10	% Women	Total	Variation (%) 11/10	% Women
TOTAL	24,299.2	1.3	56.9	15,346.2	-0.7	52.4
Public Administration	9,967.3	-1.6	60.9	5,499.6	-4.5	55.1
Higher Education	7,651.5	3.3	51.6	5,891.9	0.4	49.6
Business	6,624.1	3.8	57.0	3,915.6	3.6	52.8
PNPI	56.3	-32.7	67.3	39.1	-25.1	58.1

Data by Autonomous Community

The Autonomous Communities that registered the greatest internal expenditure on Biotechnology R&D in 2011 were Cataluña (28.6%), Comunidad de Madrid (27.9%) and Andalucía (10.5%).

Total internal expenditure on Biotechnology R&D, by Autonomous City and Community and sector of operation. Year 2011

Miles de euros

	Total	%	Business	%	Rest of sectors *	%
TOTAL	1,504,219	100.0	537,883	100.0	966,335	100.0
Andalucía	157,364	10.5	52,181	9.7	105,183	10.9
Aragón	22,241	1.5	10,007	1.9	12,234	1.3
Asturias, Principado de	15,195	1.0	4,972	0.9	10,224	1.1
Balears, Illes	17,208	1.1	2,499	0.5	14,709	1.5
Canarias	26,624	1.8	3,936	0.7	22,688	2.3
Cantabria	10,303	0.7
Castilla y León	53,205	3.5	16,614	3.1	36,591	3.8
Castilla-La Mancha	11,887	0.8	2,556	0.5	9,331	1.0
Cataluña	429,762	28.6	154,785	28.8	274,977	28.5
Comunitat Valenciana	124,008	8.2	29,440	5.5	94,567	9.8
Extremadura	6,875	0.5
Galicia	46,282	3.1	15,899	3.0	30,383	3.1
Madrid, Comunidad de	419,573	27.9	159,422	29.6	260,151	26.9
Murcia, Región de	37,179	2.5	4,909	0.9	32,270	3.3
Navarra, Comunidad Foral de	34,137	2.3	11,140	2.1	22,997	2.4
Pais Vasco	86,670	5.8	62,106	11.5	24,564	2.5
Rioja, La	5,706	0.4	2,383	0.4	3,323	0.3
Ceuta	-	-	-	-	-	-
Melilla	-	-	-	-	-	-

(*) Rest of sectors, Public Administration, PNPI and Higher education

(1) Not available to protect statistical confidentiality

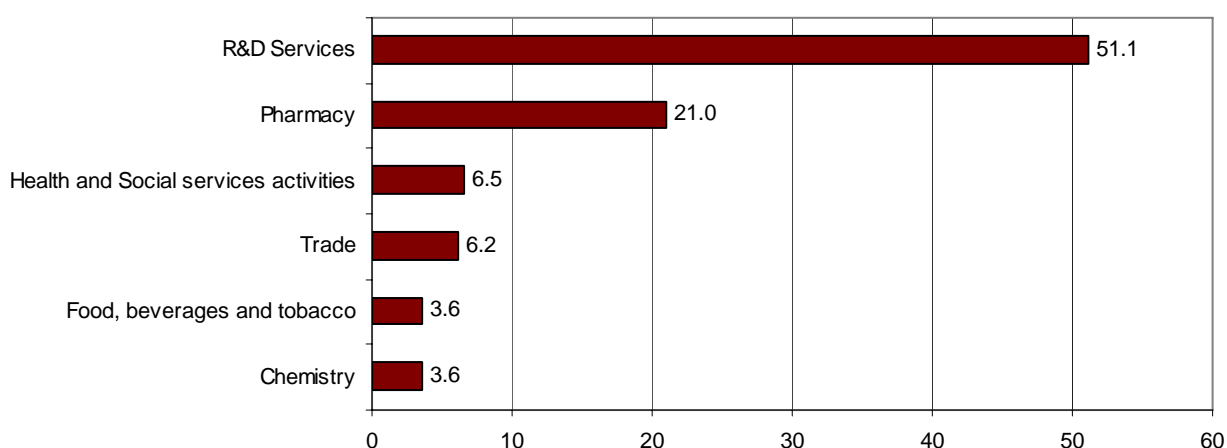
(-) Numerical data equal to zero not resulting from rounding

Data by sector and branch of activity

Regarding only the Business sector, the Services sector accounted for 67.1% of internal expenditure on Biotechnology-related R&D activities, companies in Industry 30.6% and Agriculture 2.3%.

By branch of activity, worth noting were *R&D Services* (with 51.1% of total expenditure on Biotechnology-related R&D) and *Pharmacy* (with 21.0%).

Distribution of internal expenditure on Biotechnology R&D, by branch of activity. Year 2011 (%)



External expenditure on Biotechnology R&D activities

Purchases of Biotechnology R&D reached 199 million euros in the year 2011. 19.1% of this expenditure was made outside of Spain.

By sector, Business presented the highest percentage over total expenditure on external R&D activities, with 69.3%.

Purchases of Biotechnology R&D services. Year 2011

Unit: thousands of euros

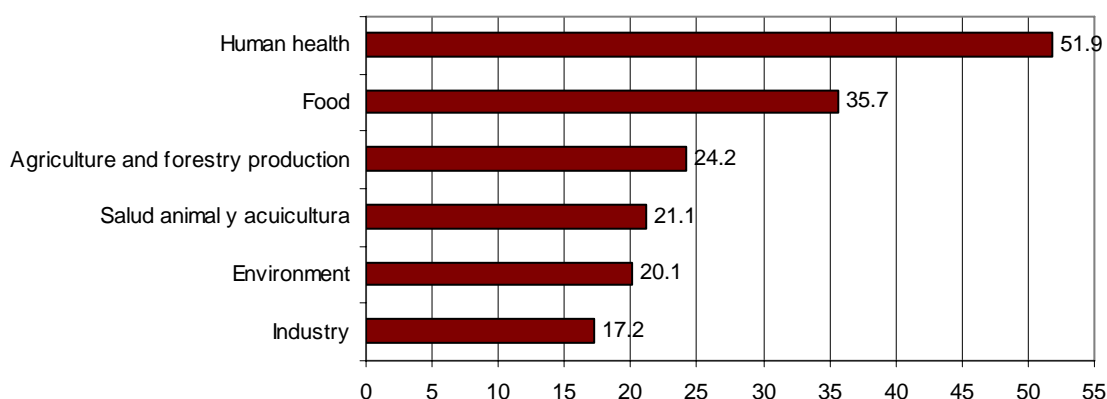
	Total	Business	Rest of sectors *
Purchases of Biotechnology R&D services	199,064	137,995	61,070
- In Spain	161,070	106,150	54,919
- Abroad	37,995	31,845	6,150

(*) Rest of sectors: Public Administration, PNPI and Higher Education

Areas of Biotechnology application

Of the six areas of final application of the products obtained from the use of the different types of biotechnology, the most selected by the industry, public administration, others higher education centers and Private Non-Profit Institutions, that realized internal Biotechnology R&D, were *Human health* (chosen 51.9% of the total units) and *Food* (35.7% of the total units).

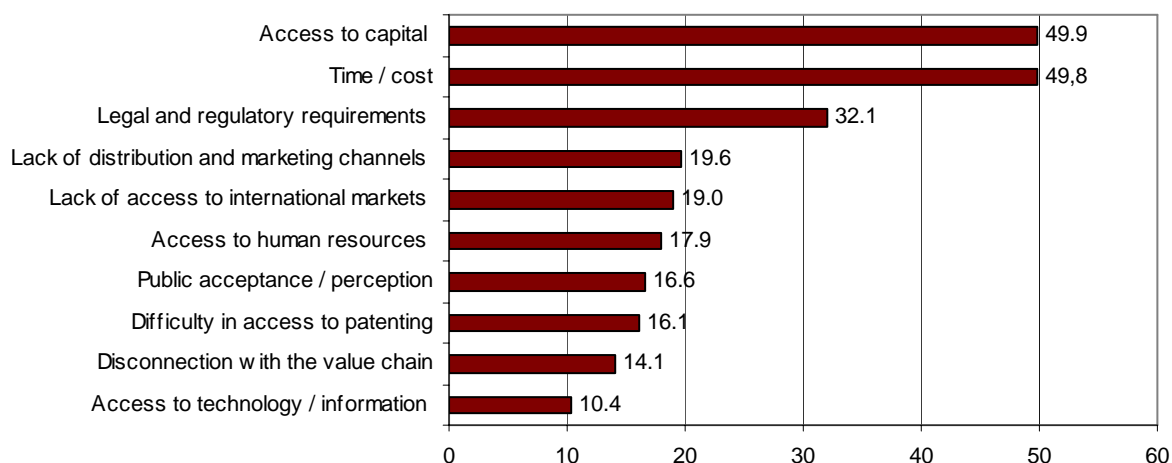
Percentage of units with biotechnological activities, according to the areas of final Biotechnology application. Year 2011 (%)



Impediments to the development of Biotechnology

Of the total units that carried out internal Biotechnology R&D, 49.9% indicated with a high* valuation, that the highest impediment of development and marketing activities of biotechnological products and processes, was *Access to capital* ; followed by *Time/cost* with 49.8%.

Impediments to the development of Biotechnologies. Year 2011 (%)



*The scale was: High, Medium, Low and Does not know

Methodological note

The Statistics on Biotechnology Use were prepared following the methodological guidelines of the OECD.

The information was collected, in the case of companies, through an additional module annexed to the Technological Innovation in Companies Survey, and intended for all those units that were potentially linked to Biotechnology. In the case of the Public Sector, the information is collected through a module annexed to the Statistics on R&D Activities, and is aimed at all those units that carry out the R&D statistics, be they Higher education centres, Public Administration or PNPI.

The evolution of the Statistics On Biotechnology Use in recent years has been as follows:

- In 2006, the type of biotechnology activity and area of final application of the products obtained from it were introduced as a study target.
- In 2007, the internationalisation of biotechnology-related activities was introduced.
- In 2008, expenditure on external R&D activities in Biotechnology was included.

As of the year 2010, part of the companies researched for the publication of the Statistics on Biotechnology Use was obtained through a random sample. Up until that point, the units involved in the compilation of the statistics were processed by census.