

11 December 2013

Statistics on Biotechnology Use
Year 2012. *Final results*

- Internal expenditure on Biotechnology-related R&D activities decreases 3.3%, as compared with 2011, reaching 1,455 million euros in 2012, accounting for 10.9% of the total internal expenditure on R&D activities.
- The total number of persons dedicated to internal Biotechnology R&D activities, on a full-time equivalent, decreases 0.7% standing at 24,121.3. This figure amounts to 11.6% of the total personnel employed in internal R&D activities and 1.4 per thousand of the population employed.
- The Autonomous Communities that register the greatest internal expenditure on Biotechnology R&D are Cataluña (29.5%), Comunidad de Madrid (26.6%) and Andalucía (10.5%).

Internal expenditure on Biotechnology-related R&D activities

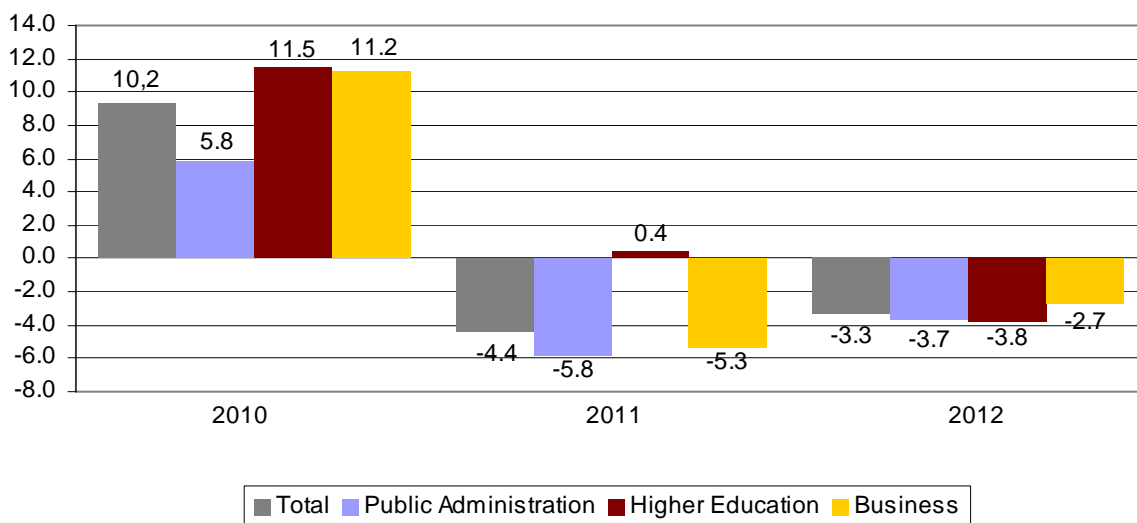
Internal expenditure on Biotechnology-related R&D activities reached 1,455 million euros in the year 2012, accounting for 10.9% of total internal expenditure on R&D activities, and a 3.3% decrease, as compared with 2011.

By sector of operation, the Public Administration presented the highest percentage over total internal expenditure on Biotechnology R&D activities (40.1%), followed by the Business sector (36.0%) and Higher education (23.6%).

The business sector experienced a 2.7% decrease in internal expenditure on Biotechnology-related R&D activities in 2012. Moreover, the number of companies with internal Biotechnology R&D activities registered a decrease of 0.5%.

In turn, in the Public Administration, internal expenditure on Biotechnology R&D dropped 3.7%, whereas in Higher education it decreased 3.8%.

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



Internal Biotechnology-related R&D activities were mainly financed by the Public Administration (54.5%) and the Business sector (28.1%) in 2012. Funds from foreign sources (9.8%), Higher education (6.2%) and Private Non-Profit Institutions (1.4%) financed the rest.

Internal expenditure on Biotechnology R&D bt sector and source of funds. Year 2012

Thousands of euros

Sector	Total	Source of funds (%)				
		Public Adm.	Higher Education	Business	PNPI	Abroad
TOTAL	1,455,171	54.5	6.2	28.1	1.4	9.8
Public Administration	583,886	84.8	0.6	6.5	1.6	6.5
Higher Education	343,015	55.8	25.1	10.3	0.8	8.0
Business	523,344	20.1	0.1	63.8	1.4	14.6
PNPI	4,926	20.5	0.8	39.2	35.1	4.3

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, decreased 0.7% in 2012, reaching 24,121,3. This figure amounted to 11.6% of the total personnel employed in R&D activities and 1.4 per thousand of the population employed.

The group of researchers in internal Biotechnology R&D activities reached the figure of 15,565.7 persons on a full-time equivalent (0.9 per thousand of the population employed), 0.7% less than in 2011.

57.5% of personnel were women. The highest percentages of female participation were recorded in PNPI (68.8%) and in the Public Administration (60.7%).

Personnel employed in internal Biotechnology R&D activities, by sector, according to occupation and sex. Year 2012

On a full-time equivalent

Sector	Total personnel			Researchers		
	Total	Variation rate	% Women	Total	Variation rate	% Women
TOTAL	24,121.3	-0.7	57.5	15,565.7	1.4	52.9
Public Administration	10,100.8	1.3	60.7	5,702.9	3.7	54.8
Higher Education	7,395.7	-3.3	52.8	5,763.9	-2.2	49.8
Business	6,543.3	-1.2	57.8	4,044.4	3.3	54.5
PNPI	81.5	44.8	68.8	54.5	39.4	68.1

Data by Autonomous Community

The Autonomous Communities that registered the greatest internal expenditure on Biotechnology R&D in 2012 were Cataluña (29.5%), Comunidad de Madrid (26.6%) and Andalucía (10.5%).

Total internal expenditure on Biotechnology R&D, by Autonomous City and Community and sector of operation. Year 2012

Thousands of euros

	Total	%	Business	%	Rest of sectors *	%
TOTAL	1,455,171	100.0	523,344	100.0	931,827	100.0
Andalucía	153,376	10.5	52,209	10.0	101,167	10.9
Aragón	29,423	2.0	11,197	2.1	18,227	2.0
Asturias, Principado de	14,401	1.0	5,000	1.0	9,401	1.0
Balears, Illes	17,780	1.2	2,904	0.6	14,876	1.6
Canarias	23,570	1.6	2,679	0.5	20,891	2.2
Cantabria	9,019	0.6
Castilla y León	49,741	3.4	15,434	2.9	34,307	3.7
Castilla-La Mancha	9,410	0.6	1,569	0.3	7,841	0.8
Cataluña	429,228	29.5	155,131	29.6	274,097	29.4
Comunitat Valenciana	114,281	7.9	27,255	5.2	87,026	9.3
Extremadura	6,288	0.4	2,554	0.5	3,734	0.4
Galicia	47,875	3.3	14,770	2.8	33,105	3.6
Madrid, Comunidad de	386,879	26.6	145,875	27.9	241,004	25.9
Murcia, Región de	31,356	2.2	5,576	1.1	25,780	2.8
Navarra, Comunidad Foral de	37,937	2.6	14,733	2.8	23,204	2.5
Pais Vasco	87,805	6.0	62,810	12.0	24,995	2.7
Rioja, La	6,801	0.5
Ceuta	-	-	-	-	-	-
Melilla	-	-	-	-	-	-

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

(..) Not available to protect statistical confidentiality

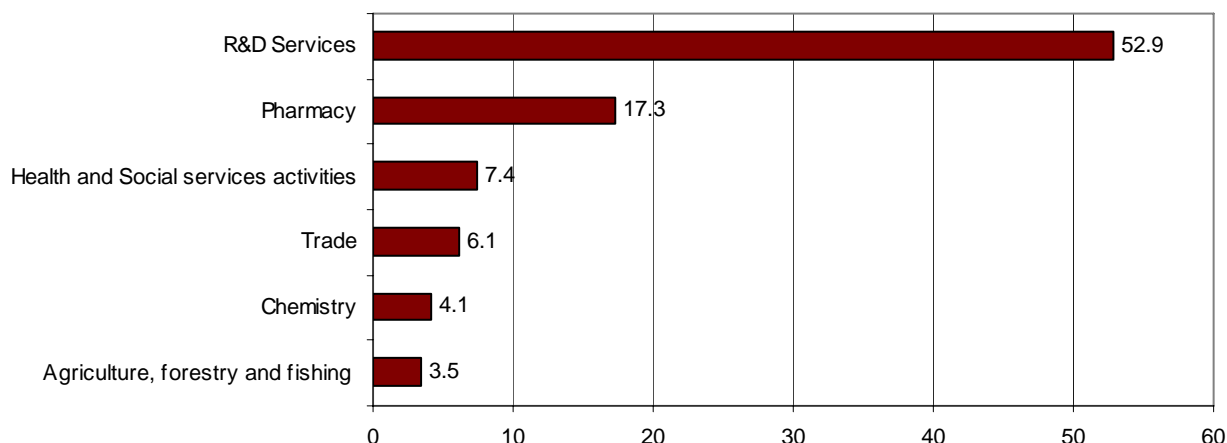
(-) Numerical data equal to zero not resulting from rounding

Data by sector and branch of activity

Regarding only the Business sector, the Services sector accounted for 69.5% of internal expenditure on Biotechnology-related R&D activities, companies in Industry 27.0% and Agriculture the remaining 3.5%.

By branch of activity, worth noting were *R&D Services* (with 52.9% of the total expenditure) and *Pharmacy* (with 17.3%).

Distribution of internal expenditure on Biotechnology R&D, by branch of activity. Year 2012 (%)



External expenditure on Biotechnology R&D activities

Purchases of Biotechnology R&D reached 173 million euros in the year 2012. Out of this expenditure, 19.6% was made outside of Spain.

By sector, Business presented the highest percentage over total expenditure on external R&D activities, with 73.5%.

Total sectors. Purchases of Biotechnology R&D services

Units: thousands of euros

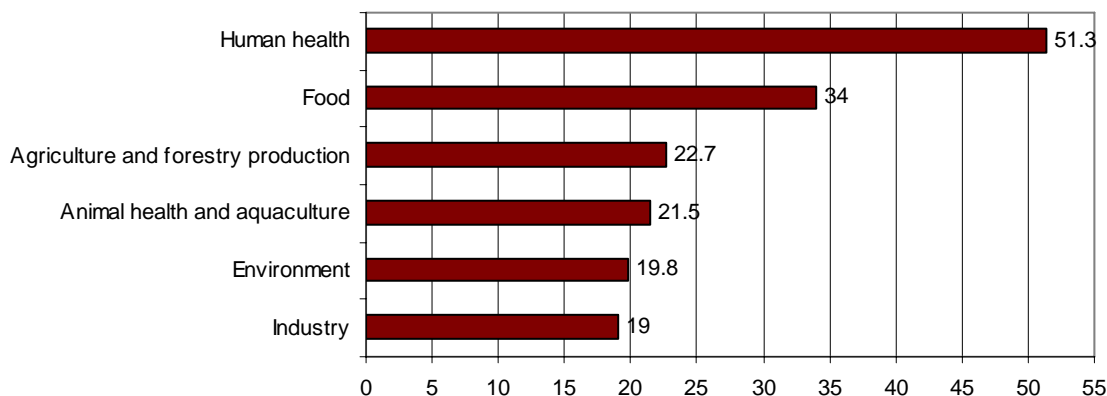
	Total 2012	Business	Rest of sectors *
Purchases of Biotechnology R&D services	173,265	127,344	45,921
- In Spain	139,297	95,947	43,349
- Abroad	33,968	31,397	2,571

(*) 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, highlighting *Human health* and *Food*, with 51.3% and 34.0% of the total units, respectively.

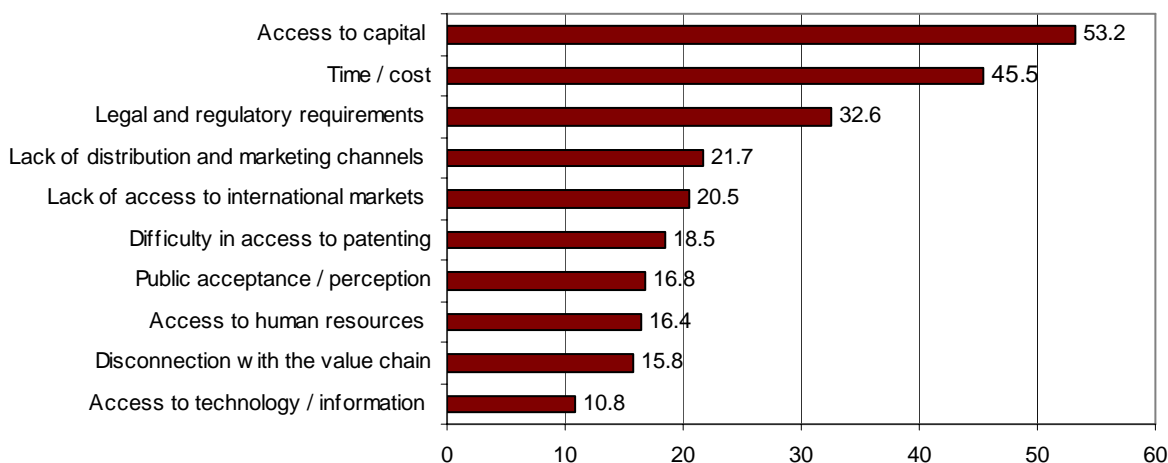
Percentage of units with biotechnological activities, according to the areas of final Biotechnology application. Year 2012 (%)



Impediments to the development of Biotechnology

The highest impediments, that, with a high* valuation, prevented or obstructed the development and marketing activities of biotechnological products and processes were *Access to capital* (with 53.2%) and *Time/cost* (45.5%).

Impediments to the development of Biotechnologies. Year 2012 (%)



*The scale was: High, Medium, Low and Unknown

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.