Instituto Nacional de Estadística

Press Release

28 February 2020

Statistics on Biotechnology Use
Year 2018. Final results

Main results

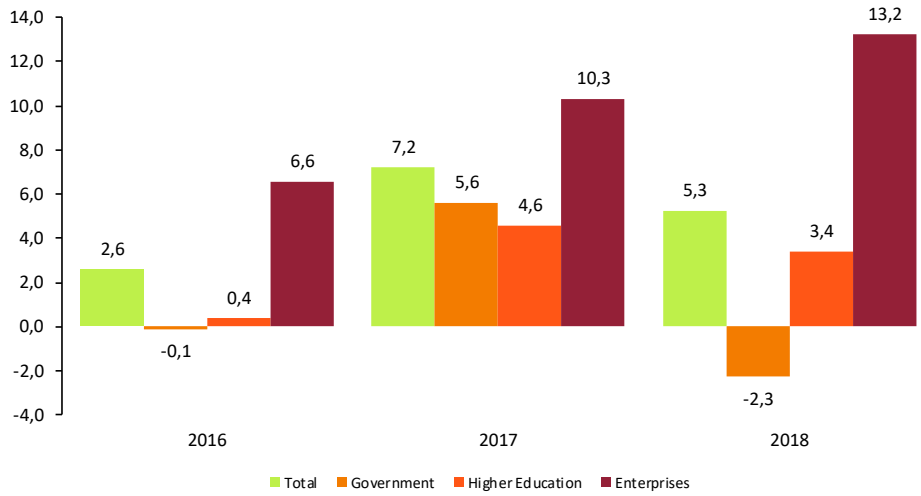
- Expenditure on internal R&D activities in Biotechnology increased by 5.3% in 2018, standing at 1,783 million euros. This figure accounted for 11.9% of total internal expenditure on internal R&D activities.
- The total number of people dedicated to internal R&D activities in Biotechnology, on a full-time equivalent, increased by 3.2% standing at 27,550.6. This figure represented 12.2% of the total persons employed in internal R&D activities.
- The Autonomous Communities with the highest expenditure on internal R&D activities in Biotechnology were Comunidad de Madrid (28,0% del total), Cataluña (27,9%) and Andalucía (10,4%).

Expenditure in Internal R&D activities related to biotechnology

Expenditure on Biotechnology-related R&D activities reached 1,783 million euros in 2018, with an increase of 5.3% with respect to 2017. This expenditure represented 11.9% of total internal expenditure on R&D activities.

By sectors of execution, the *Companies* sector increased its expenditure on internal R&D by 13.2%, and the *Higher Education* sector by 3.4%. On the contrary, the *Public Administration* sector showed a reduction of 2.3%.

Variation of expenditure on internal R&D in Biotechnology
Percentage



Regarding the total expenditure on internal R&D activities in Biotechnology, *Companies* showed the highest percentage (43.2% of the total). Following this were *Public Administration* (33.5%), *Higher Education* (23.1%) and *Private Non-Profit Institutions* (IPSFL), with 0.3%.

Source of funds

Internal R&D activities related to Biotechnology were financed in 2018, mainly by the *Public Administration* (45.3% of the total) and the *Business* sector (38.2%). Funds from the rest of the world (10.6%), *Higher Education* (4.6%) and Private Non-Profit Institutions (1.4%), financed the rest.

Internal R&D expenditure in Biotechnology by implementing sector and by source of funds

Thousand euros

Year 2018		Sources of funds (%)				
Sector	Total	Government	Higher Education	Enterprises	Private non-profit	Rest of the world
TOTAL	1.783.011	45,3	4,6	38,2	1,4	10,6
Government	596.927	75,2	0,2	13,0	1,9	9,6
Higher Education	411.163	63,0	19,4	6,9	1,6	9,1
Enterprises	769.431	12,6	0,0	74,5	0,6	12,2
Private non-profit	5.489	40,8	1,4	15,1	32,8	9,9

Employment in Internal R&D activities related to biotechnology

The total number of people dedicated to internal R&D activities in Biotechnology, on a full-time equivalent, increased by 3.2% in 2018, reaching 27,550.6. This figure accounted for 12.2% of total persons employed in R&D activities.

57.3% of the personnel employed in internal R&D activities in Biotechnology were women. The highest percentages of female participation were found in PNPI (68.2%) and in the Public Administration (62.1%).

The group of researchers in internal R&D activities in Biotechnology reached the figure of 17,572.9 people on a full-time equivalent, 5.3% more than in 2017.

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

In full-time equivalent

Year 2018	Total			Researchers		
Sector	Total	Variation Rate	% Women	Total	Variation Rate	% Women
TOTAL	27.550,6	3,2	57,3	17.572,9	5,3	54,2
Government	10.492,6	1,5	62,1	6.124,4	9,0	58,8
Higher Education	8.726,3	2,7	51,7	6.798,1	4,6	49,6
Enterprises	8.236,9	6,3	57,0	4.596,1	1,7	54,7
Private non-profit	94,8	-10,7	68,2	54,3	-13,7	63,2

Data by Autonomous Community

The Autonomous Communities with the highest expenditure on internal R&D activities in Biotechnology in 2018 were Cataluña (28.0% of the total), Comunidad de Madrid (27.9%) and Andalucía (10.4%).

Expenditure on internal R&D in Biotechnology by autonomous communities, according to execution sector

Thousand euros

Year 2018	TOTAL	%	Enterprises	%	Rest of sectors [1]	%
TOTAL	**1.783.011**	**100,0**	**769.431**	**100,0**	**1.013.580**	**100,0**
Andalucía	185.328	10,4	74.049	9,6	111.278	11,0
Aragón	30.456	1,7	14.900	1,9	15.556	1,5
Asturias, Principado de	17.971	1,0	4.758	0,6	13.213	1,3
Balears, Illes	20.081	1,1	.	.	.	.
Canarias	16.547	0,9	2.715	0,4	13.832	1,4
Cantabria	5.733	0,3	.	.	.	.
Castilla y León	66.350	3,7	31.768	4,1	34.582	3,4
Castilla-La Mancha	13.300	0,7	3.343	0,4	9.957	1,0
Cataluña	497.247	27,9	216.534	28,1	280.713	27,7
Comunitat Valenciana	143.491	8,0	51.407	6,7	92.085	9,1
Extremadura	3.612	0,2	1.881	0,2	1.731	0,2
Galicia	85.729	4,8	23.615	3,1	62.114	6,1
Madrid, Comunidad de	498.429	28,0	214.459	27,9	283.970	28,0
Murcia, Región de	33.478	1,9	12.186	1,6	21.292	2,1
Navarra, Comunidad Foral de	52.895	3,0	34.524	4,5	18.371	1,8
Pais Vasco	104.535	5,9	73.950	9,6	30.585	3,0
Rioja, La	7.829	0,4	2.294	0,3	5.535	0,5
Ceuta	..	..	..	..	..	..
Melilla	..	..	..	..	..	..

(1) Rest of sectors: Government, PNP and Higher Education
(..) Not available or unexist
(.) Protected data by confidentiality

Expenditure on external R&D activities in Biotechnology

The purchase of R&D in Biotechnology reached 153.6 million euros in 2018. 36.2% of this expenditure was made outside Spain.

By sector, the Business sector registered the highest percentage of total expenditure in external R&D activities, with 78.3%.

Expenditure on external R&D activities in Biotechnology

Thousand euros

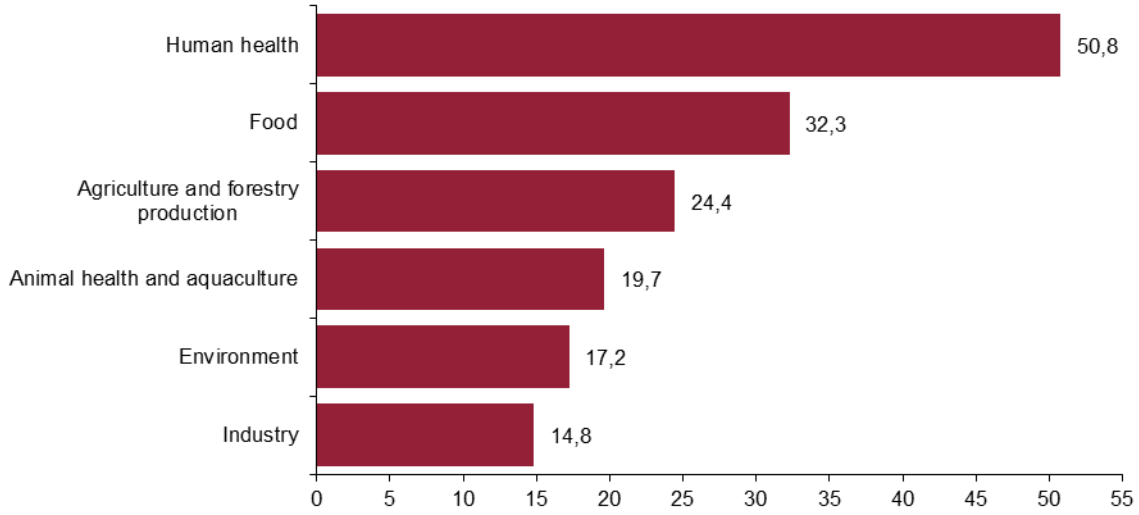
	Total 2018	Enterprises	Rest of sectors [1]
Purchases of Biotechnology R&D services	**153.607**	**120.281**	**33.326**
- Spain	98.024	69.564	28.460
- Rest of the World	55.583	50.718	4.865

(1) Rest of sectors: Government, PNP and Higher Education

Biotechnology Application Areas

Among the areas of final application of the products obtained from the use of the different types of biotechnology, worth noting were *Human health* and *Food*, with 50.8% and 32.3% of the total units, respectively.

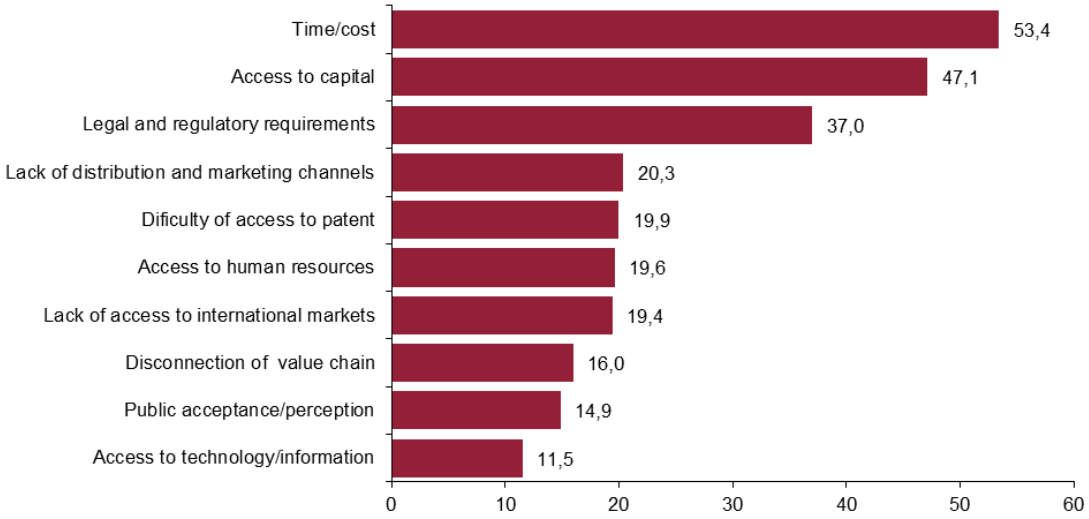
Units with biotechnological activities, according to the areas of final Biotechnology application. Year 2018. Percentage



Obstacles to the development of Biotechnology

In 2018, the main obstacles that, with a high valuation[1], prevented or hindered the advance of the development and commercialization of biotechnological products and processes were *Time/cost* and *Access to capital* (with 53.4% and 47.1%, respectively).

Obstacles for the development of Biotechnologies. Year 2018. Percentage



[1]The scale is: High, Medium, Low and Doesn't Know

Data Review and Updates

The data published today are final. The results are available at INEBase.

Methodological note

Statistics on the use of biotechnology aim to measure the national effort in activities related to biotechnology, so that it can provide the necessary information for the adequate decision-making in scientific-technological policy.

In this regard, the objective is to ascertain the type of biotechnology-related activities that are carried out in each of the sectors in which the economy is divided; the final application areas of the products obtained via the development of biotechnologies; economic and human resources appointed to the biotechnology-related productive and investigation activity in Spain.</p>

Type of survey: continuous annual survey.

Population scope: the group of companies, public bodies, universities or higher education centres and private nonprofit institutions (IPSFL) that use Biotechnology in their activities.

Geographical scope: the entire national territory.

Reference period: the calendar year.

Collection method: mixed with questionnaire shipments by postal mail and web completion.

For more information you can access the methodology and the standardized methodological report at:

http://www.ine.es/dyngs/INEbase/es/operacion.htm?c=Estadistica_C&cid=1254736176808&menu=metodologia&idp=1254735576669

For further information see **INEbase**: **www.ine.es/en/** Twitter: **@es_ine**
All press releases at: **www.ine.es/en/prensa/prensa_en.htm**
Press office: Telephone numbers: (+34) 91 583 93 63 /94 08 – **gprensa@ine.es**
Information Area: Telephone number: (+34) 91 583 91 00 – **www.ine.es/infoine/?L=1**