

24 February 2021

## Statistics on Biotechnology Use Year 2019. Final results

### Main results

- Expenditure on internal R&D activities in Biotechnology increased by 14.4% in 2019, standing at 2.040 million euros. This figure accounted for 13.1% 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 7.6% standing at 29,655.1. This figure represented 12.8% 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 Cataluña (29.5% of the total), Comunidad de Madrid (27.5%) and Andalucía (10.2%).

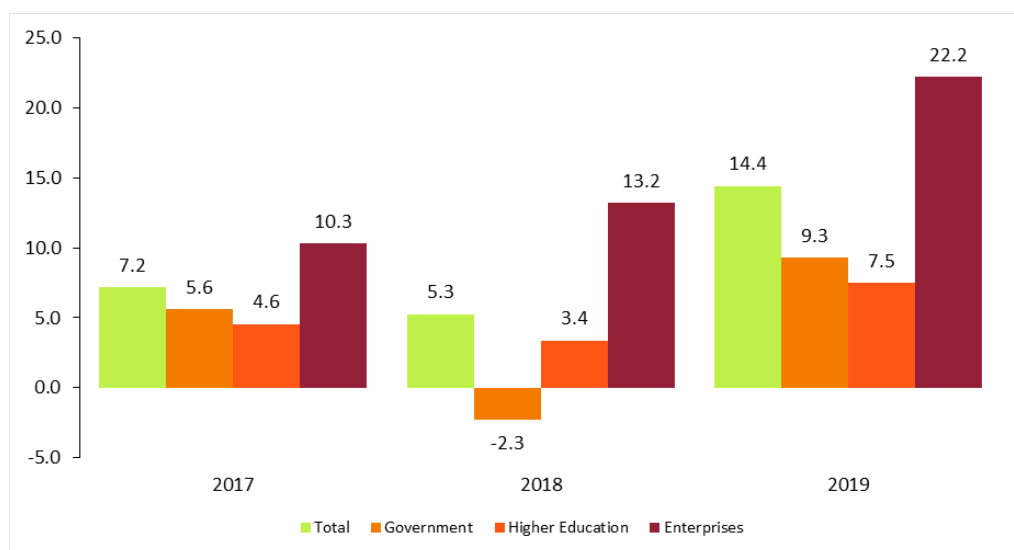
### Expenditure in Internal R&D activities related to biotechnology

Expenditure on Biotechnology-related R&D activities reached 2.040 million euros in 2019, with an increase of 14.4% with respect to 2018. This expenditure represented 13.1% of total internal expenditure on R&D activities.

By sectors of execution, the *Companies* sector increased its internal spending by 22.2%, the *Public Administration* sector by 9.3% and the *Higher Education* sector by 7.5%.

### 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 (46.1% of the total). Following this were *Public Administration* (32.0%), *Higher Education* (21.7%) and *Private Non-Profit Institutions* (IPSFL), with 0.3%.

### Expenditure on internal R&D in Biotechnology by execution sector

Year 2019

Sector	Total (thousands of euros)	%	Annual rate (%)	% over total R&D
<b>TOTAL</b>	<b>2,040,323</b>	<b>100.0</b>	<b>14.4</b>	<b>13.1</b>
Government	652,393	32.0	9.3	24.6
Higher Education	442,089	21.7	7.5	10.7
Enterprises	940,230	46.1	22.2	10.8
Private non-profit	5,611	0.3	2.2	13.4

### Financing of Internal R&D

Internal R&D activities related to Biotechnology were financed in 2019, mainly by the *Public Administration* (42.3% of the total) and the *Business* sector (41.4%). Funds from the rest of the world (10.4%), *Higher Education* (4.4%) and *Private Non-Profit Institutions* (1.5%), financed the rest.

### Expenditure on internal R&D in Biotechnology by execution sector and financing

Year 2019. Thousand euros

Sector	Total	Sources of funds (%)				
		Government	Higher Education	Enterprises	Private non- profit	Rest of the world
<b>TOTAL</b>	<b>2,040,323</b>	<b>42.3</b>	<b>4.4</b>	<b>41.4</b>	<b>1.5</b>	<b>10.4</b>
Government	652,393	72.8	0.2	14.8	2.0	10.2
Higher Education	442,089	63.9	19.8	6.4	1.3	8.7
Enterprises	940,230	10.9	0.0	76.6	1.0	11.4
Private non-profit	5,611	41.5	0.0	15.8	36.8	6.0

### 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 7.6% in 2019, reaching 29,655.1. This figure accounted for 12.8% 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 (70.4%) and in the Public Administration (63.2%).

The group of researchers in internal R&D activities in Biotechnology reached the figure of 19,150.3 people on a full-time equivalent, 9.0% more than in 2018.

## Personnel employed in internal R&D activities in Biotechnology by execution sector, occupation, and sex Year 2019

Sector	Total			Researchers		
	Total *	Variation Rate	% Women	Total *	Variation Rate	% Women
<b>TOTAL</b>	29,655.1	7.6	57.3	19,150.3	9.0	54.0
Government	11,013.2	5.0	63.2	6,546.6	6.9	59.2
Higher Education	9,177.3	5.2	49.9	7,128.5	4.9	47.7
Enterprises	9,365.2	13.7	57.5	5,410.6	17.7	56.1
Private non-profit	99.4	4.9	70.4	64.6	19.0	66.6

\* In full-time equivalent

## Data by Autonomous Community

The Autonomous Communities with the highest expenditure on internal R&D activities in Biotechnology in 2019 were Cataluña (29.5% of the total), Comunidad de Madrid (27.5%) and Andalucía (10.2%).

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

Year 2019. Thousand euros

	TOTAL	%	Enterprises	%	Rest of sectors *	%
<b>TOTAL</b>	<b>2,040,323</b>	<b>100.0</b>	<b>940,230</b>	<b>100.0</b>	<b>1,100,093</b>	<b>100.0</b>
Andalucía	207,329	10.2	83,616	8.9	123,713	11.2
Aragón	29,983	1.5	14,689	1.6	15,294	1.4
Asturias, Principado de	19,526	1.0	6,578	0.7	12,947	1.2
Balears, Illes	21,400	1.0	..	..	..	..
Canarias	16,081	0.8	2,898	0.3	13,183	1.2
Cantabria	6,826	0.3	..	..	..	..
Castilla y León	77,769	3.8	42,946	4.6	34,824	3.2
Castilla-La Mancha	17,909	0.9	4,878	0.5	13,031	1.2
Cataluña	601,626	29.5	276,406	29.4	325,220	29.6
Comunitat Valenciana	173,491	8.5	68,239	7.3	105,252	9.6
Extremadura	4,329	0.2	2,522	0.3	1,807	0.2
Galicia	92,678	4.5	27,679	2.9	64,999	5.9
Madrid, Comunidad de	560,597	27.5	270,570	28.8	290,026	26.4
Murcia, Región de	39,844	2.0	17,252	1.8	22,592	2.1
Navarra, Comunidad Foral de	45,610	2.2	26,276	2.8	19,334	1.8
Pais Vasco	116,990	5.7	86,023	9.1	30,967	2.8
Rioja, La	8,336	0.4	..	..	..	..
Ceuta	.	.	.	.	.	.
Melilla	.	.	.	.	.	.

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

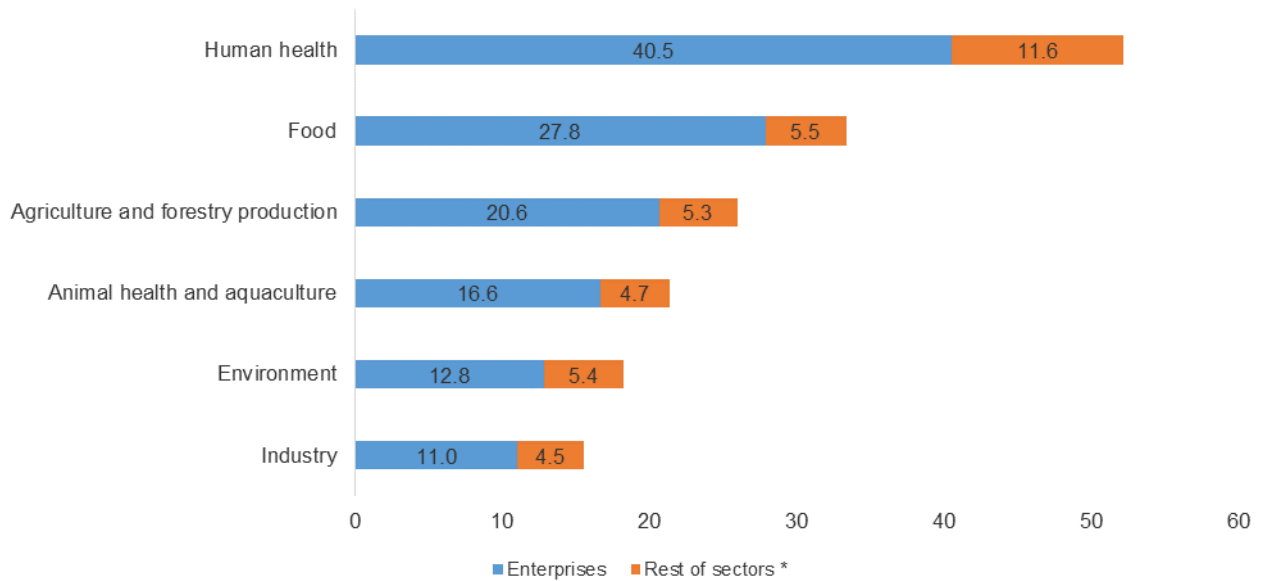
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### Biotechnology Application Areas

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 52.1% and 33.3% of the total units, respectively.

#### Units with biotechnological activities, according to the areas of final Biotechnology application. Year 2019. Percentage



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

### Data Review and Update

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

## Methodological note

The objective of the Statistics on the use of biotechnology is to measure national efforts in biotechnology-related activities, in order to provide the necessary information for 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.

**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/dynqs/INEbase/es/operacion.htm?c=Estadistica\\_C&cid=1254736176808&menu=metodologia&idp=1254735576669](http://www.ine.es/dynqs/INEbase/es/operacion.htm?c=Estadistica_C&cid=1254736176808&menu=metodologia&idp=1254735576669)

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