PHARMACEUTICAL SECTOR IN URUGUAY

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Uruguay XXI
INVESTMENT, EXPORT AND COUNTRY BRAND PROMOTION AGENCY

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WHY INVEST IN URUGUAY?

HUMAN AND VETERINARY PHARMA SECTOR

- Uruguay has a series of structural strengths that support its value proposition for attracting investment and developing exports focused on Life Sciences (pharmaceuticals and medical devices, animal health and biotechnology-based developments).

- Reliability, stability, institutional strength, quality of life, proven history as a business hub for multinational and multi-Latin pharmaceutical companies, access to qualified talent and tax incentives are some of the advantages that Uruguay offers. With 3.4 million inhabitants, the country can quickly supply its domestic demand without interfering with regional supply.

- Uruguay offers a combination of complementary services and investment opportunities, following a logic that goes from drug development to the most advanced services in the regional distribution value chain and administrative back-office or customer service, forming a cluster mainly composed of multinational and multi-Latin companies.

- According to the latest survey of foreign companies (2023), 84% of foreign investors are satisfied or very satisfied with the business climate in Uruguay. Economic, political and social stability, legal security, tax incentives, foreign exchange freedom and the ease of repatriating dividends are the main reasons why they invest in Uruguay. Likewise, among investment incentives, there is a high level of satisfaction with the Investment Law (94%) and with the free trade zone regime (87%).

- Several international pharmaceutical and medical device companies operate successfully in the country, either as a global trade and services hub (locating regional distribution centers, trading centers and support services), as a production hub (building new facilities and/or acquiring local companies in both human and animal health) or as a services hub (either R&D, CROs, diagnostics, startups).

- As support to the activities related to the production of the pharmaceutical sector, there is a dynamic ecosystem supporting innovation that to develop new product lines or innovative projects between companies and research groups. This ecosystem includes biotechnology, diagnostics, clinical research, medical equipment, ingredients, as well as startups and research groups that strengthen R&D activities.

- Learn more: https://www.uruguayxxi.gub.uy/en/invest/sector/life-sciences/
  https://www.uruguayxxi.gub.uy/es/quiero-invertir/sector/ciencias-de-la-vida/

EXECUTIVE OVERVIEW

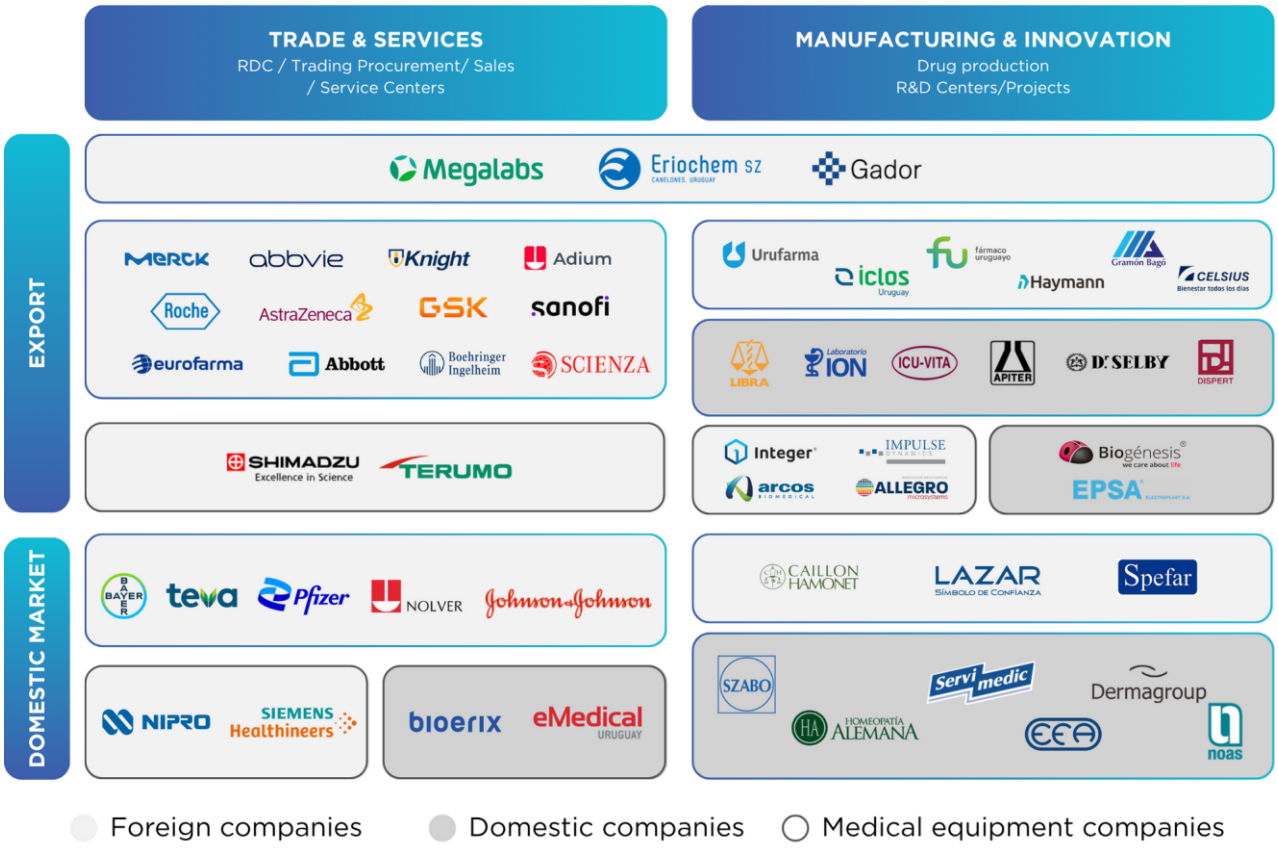
The global pharmaceutical sector has grown exponentially in recent decades. Its scope expanded from traditional manufacturing and trading to a major licensing and patenting market. Although the sector covers more and more areas, this report focuses on activities related to human and animal pharmaceuticals -both traditional and those that incorporate biotechnology in their processes- and medical equipment.

In Uruguay, the pharmaceutical sector has also grown significantly. Although there have been companies linked to the industry since the beginning of the 20th century, their number and production have multiplied considerably in the last 30 years.

Uruguay offers a set of complementary services and investment opportunities, following a logic that goes from knowledge generation and drug production to advanced services in the trade value chain, regional distribution and back-office or customer service (business service centers), creating a cluster that has been boosted by foreign direct investment.

Pharmaceutical and veterinary companies operate in Uruguay using different business platforms. The following table shows some of the companies that develop trade and services hub activities, on the one hand, and production and innovation on the other

HUMAN PHARMA COMPANIES IN URUGUAY

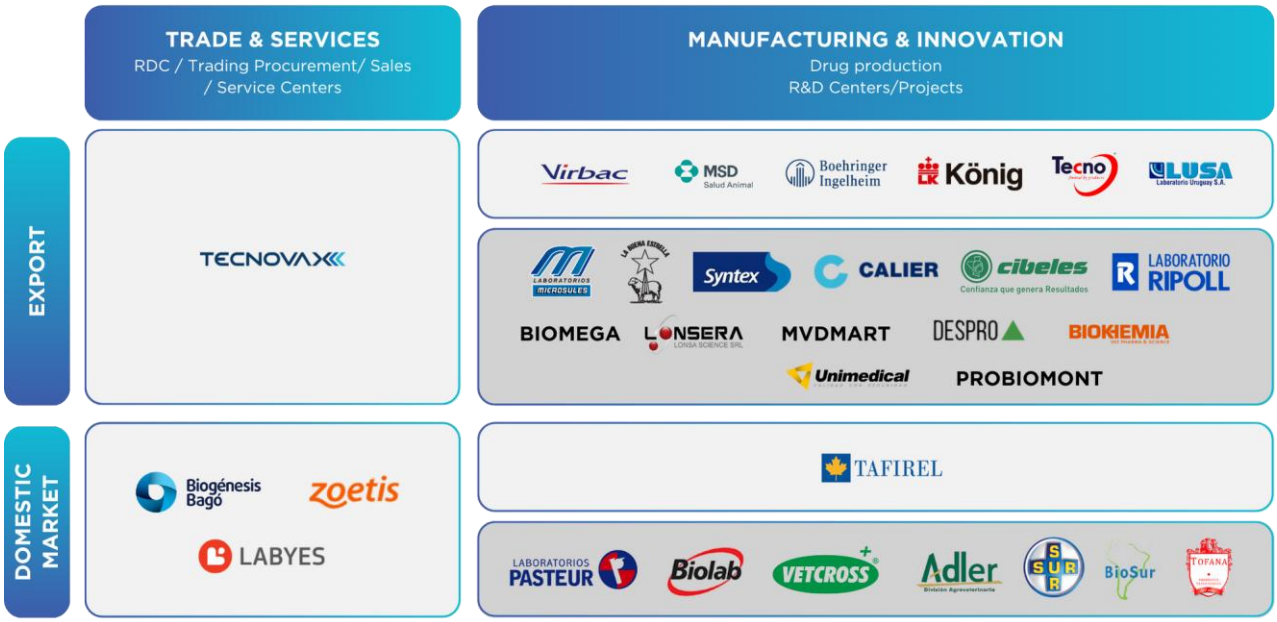


Within these platforms, most of the companies are focused on the foreign market, while others serve exclusively the domestic market[1]. The dynamics of the sector reflect that, although companies start operations in some of these business platforms, over time they incorporate new activities and expand their presence in other platforms. For example, many international companies, after starting regional logistics activities in the country, added other service activities as part of their expansion strategy. It is also common for global companies focused on the domestic market to incorporate trade and services hub activities and for companies with production activities for the domestic market to leverage their growth through exports. A good example is the case of ***Megalabs***, with a presence in trade and services hub platforms, as well as production and innovation with a focus on the international market.

The sector has a significant participation of foreign capital companies. Although the medical equipment subsector is made up of a small number of companies, the presence of **Integer** -a US company- due to its strong export flow, gives the sector considerable weight.

[1] e.g.: BAYER - PFIZER - MSD - TEVA - JANSEN (J&J) - SCIENZA

VETERINARY COMPANIES IN URUGUAY



Considering the veterinary pharmaceutical sector from the same perspective, we see that a large majority of companies are concentrated mainly in the production and innovation platform and strongly focused on exports.

Unlike the human pharmaceuticals sector, there is only one company that carries out regional logistics activities from Uruguay and few international companies have commercial offices to serve the domestic market.

Based on the available information, the following sections describe each of the defined segments.

Table No. 1 shows an outline of the main data for the sector.

TABLE 1
Main Indicators
2024

PHARMA SECTOR		COMMERCIAL AND SERVICES HUB		MANUFACTURE AND INNOVATION HUB		TOTAL**
		Logistics - Trading - SSC	Import - Representation	Export.*	Domestic market	
HUMAN PHARMA.	Companies	60	30	20	25	135
	Employment	1,650	580	3,550	690	6,470
VET.	Companies	1	10	20	10	41
	Employment	10	100	1,150	100	1,360
TOTAL	Companies	**61**	**40**	**40**	**35**	**176**
	Employment	**1,660**	**680**	**4,700**	**790**	**7,830**
	Millions	**US$ 914** transits	**US$ 476** imports	**US$ 362** exports	**US$ 566** Products consumed domestically	**US$ 928** Production

* Includes medical device exporters. Includes exports from Free Trade Zones,
** Total production is the sum of the exported amount and the production destined for internal distribution.

Combining the human, animal pharmaceuticals sectors and the medical devices segments, ***the sector's total production reached US$ 928 million in 2024.*** *This represents* ***11% of Uruguay's industrial GDP*** *and 1% of total GDP.*[2]

With total exports totaling US$ 362 million (including medical equipment and free trade zones exports), **the sector represented more than 2.8% of total exports in 2024.** This year, US$ 226 million were exported in pharmaceuticals for human use (more than half from free trade zones), US$ 91 million in veterinary products and US$ 44 million in medical equipment.

Uruguay's importance as a regional hub for medicines for human use is evidenced in the growing volume of products that pass through the country in **transit**, mostly shipped from

[2] A comparison with the Gross Value of Production would be more appropriate, but this data is not available for 2024.

Europe and North America and destined for Latin America. **In 2024, transits reached US$ 914 million.**[3]

*The sector **employs** directly almost **7,800 people** and has a business network of more than **175** interconnected **companies, 135 of** which correspond to the **human pharmaceuticals** and **medical equipment** segment **and the remaining 40 to animal health.***

Of the total employment, **6,470 positions correspond to the human segment**. Most of the employment generated (3,500 people) corresponds to exporting companies, most of which are foreign or acquired by regional foreign economic groups. Companies engaged in trade and services hub activities are also important generators of employment. These companies create around 1,600 direct jobs, including the specialized suppliers in the logistics chain mentioned below. On the other hand, companies that handle the domestic supply of foreign pharmaceuticals -often local representatives of international laboratories- employ an estimated 580 people. The **animal health segment generates some 1,300 direct jobs**. In addition, information gathered from the **biotechnology-startup sector** estimated that these young companies generate approximately **250 jobs for technicians, science graduates, masters and PhDs.**

The sector's ecosystem is complemented by specialized technology parks, public and private universities that offer multiple training options and contribute to research, along with research groups (+160) and a growing number of startups (+30).

[3] These figures do not include hub activities carried out exclusively within the airport, since the goods do not change customs precincts and are not recorded as transits.

1. INTERNATIONAL TRENDS

In recent decades, the global market for healthcare services and products has expanded significantly, driven by population growth, rising life expectancy, and the aging of populations worldwide. Advances in biotechnology (cellular and gene therapies), together with artificial intelligence and the intensive use of data, point to an even more dynamic growth of this market in the next years.

The pharmaceutical sector is undergoing a significant transformation driven by the adoption of artificial intelligence and *machine learning*. These technologies are revolutionizing inventory management, demand planning and risk mitigation. According to LogiPharma's The AI Report 2024, based on a survey of 100 supply chain leaders, 51% of them expect to realize a return on investment in artificial intelligence within the next two to three years. Confirming the confidence in the transformative potential of this technology.

However, AI integration faces significant challenges, such as the need for clean, accurate and real-time data. Effective collaboration between supply chain partners is required to ensure the continuous exchange of information, which is essential to optimize processes and obtain valuable results for decision making.

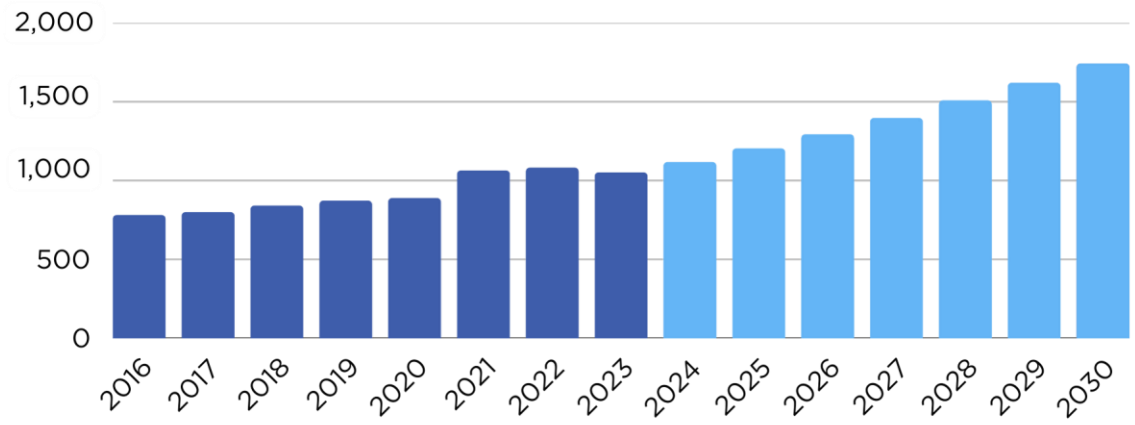
Sustainability has also become a priority. Pharmaceutical companies are adopting specialized tools to calculate and report CO^2 emissions, especially in their cold chain sectors. However, challenges remain, such as the lack of accurate standards for calculating emissions, especially with regard to volumetric weight and the impact of returnable packaging. Addressing these gaps is crucial for more accurate measurement and greater environmental transparency.

Another key aspect is efficient cold chain management, especially in pharmaceuticals, where product integrity is crucial. Companies are investing in real-time monitoring technologies, alert automation and centralized visibility systems. These tools enable proactive risk management and optimization of logistics routes, contributing to cost and emissions reduction.[4]

The growth experienced and projected for the industry is clearly reflected in the evolution of sales of pharmaceutical and medical technology products, as shown in Graph No. 1.

[4] The AI Report 2024 - LogiPharma

GRAPH 1
Global medication sales
US$ Billions



Source: World Preview 2024 – Pharma's Growth Boost - Evaluate

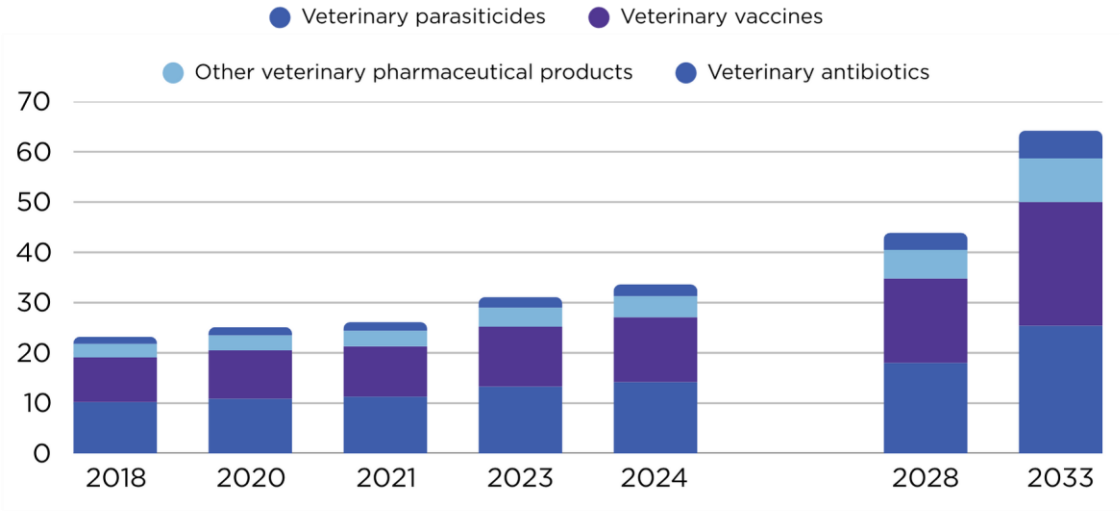
According to data and projections by Evaluate, global drug sales in 2021 exceeded US$ 1 trillion. They are expected to **grow at an average annual rate of 7% in the coming years and total** a value close to **US$ 1.7 trillion in 2030.**[5]

Although veterinary pharmaceutical products have similarities with those intended for human health, their market has a different logic and should be analyzed separately.

The global veterinary health market is growing, but it is significantly smaller than the human health market. Key factors such as technological advances in diagnostics and therapies, as well as increasing productivity in animal husbandry -which in turn increases the risk of zoonosis transmission- are part of the explanation for this trend. In addition, growing awareness of animal health as result of government initiatives is driving the growth of this market, which is estimated at US$ 33 billion and is expected to grow to US$ 64 billion by 2033.[6]

[5] World Preview 2024 - Pharma's Growth Boost - Evaluate
[6] Global Veterinary Pharmaceuticals Market Report 2024 - The Business Research Company.

GRAPH 2
Animal Health Global Market
US$ Billions



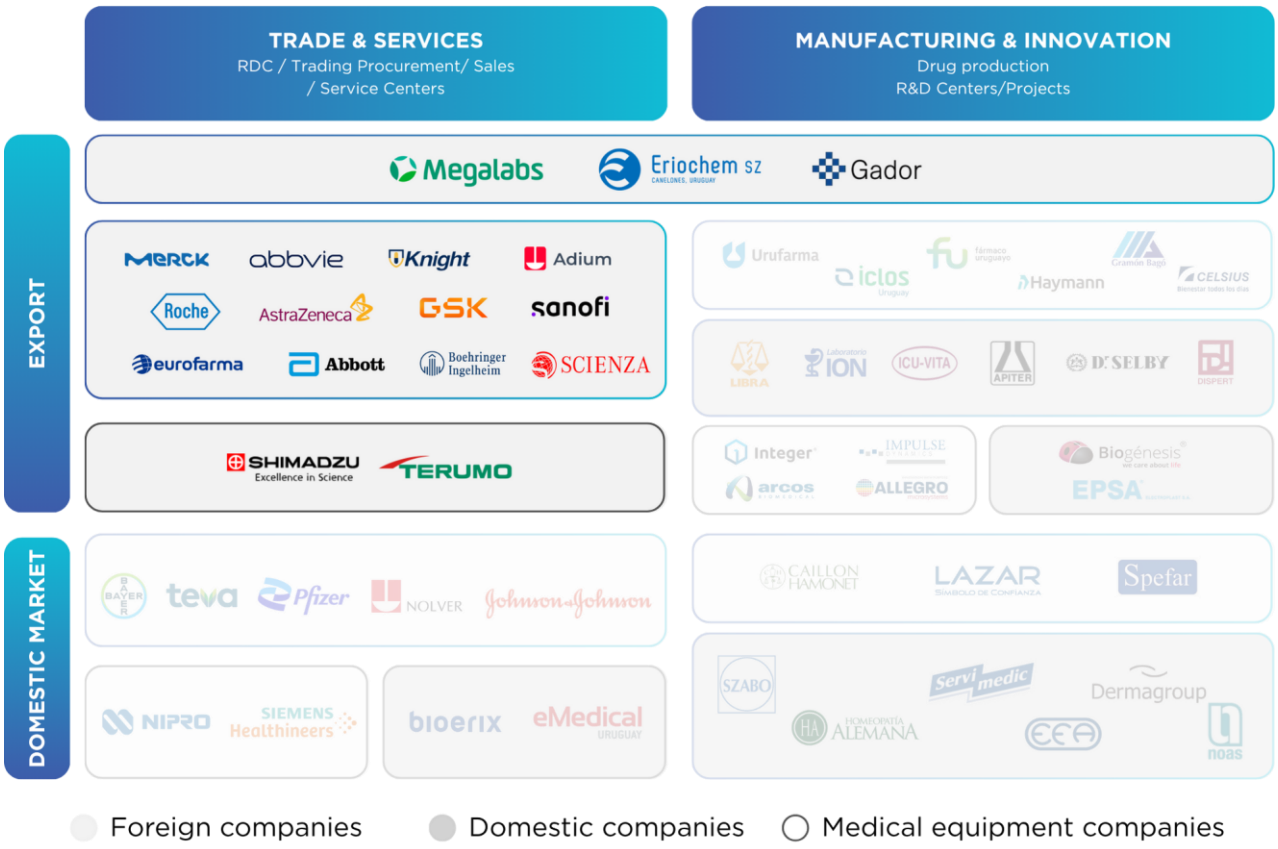
Source: Global Veterinary Pharmaceuticals Market Report 2024 – The Business Research Company.

This global industry growth scenario and the factors mentioned above reinforce the importance of innovation activities for pharmaceutical companies, that together with ~~a~~ the concern for profitability. This context generates opportunities for related services, which may correspond to manufacturing activities as well as innovation and research services or even distribution. Many of the opportunities mentioned above are applicable to the pharmaceutical industry in Uruguay, which is discussed below.

2. URUGUAY: TRADE AND SERVICES HUB

A hub is a strategically located operations center that facilitates the concentration of commercial activities and specialized services, serving as a connection point for companies and suppliers in various industries. In the context of the pharmaceutical sector, a hub refers to an infrastructure that allows the centralization of key operations such as distribution, warehousing and logistics services, ensuring efficiency and optimization in the flow of products. These hubs not only act as logistics platforms, but are also value-added centers where activities such as fractioning, conditioning and storage of products under controlled conditions, essential for the pharmaceutical industry, are carried out.

TRADE AND SERVICE HUB COMPANIES



In particular, hub activities have been concentrated in free trade zones (mainly in Parque de las Ciencias and Zonamerica) and in the free airport (LACC), which have the necessary infrastructure to provide logistics and distribution services, fractioning, conditioning and cold storage activities.

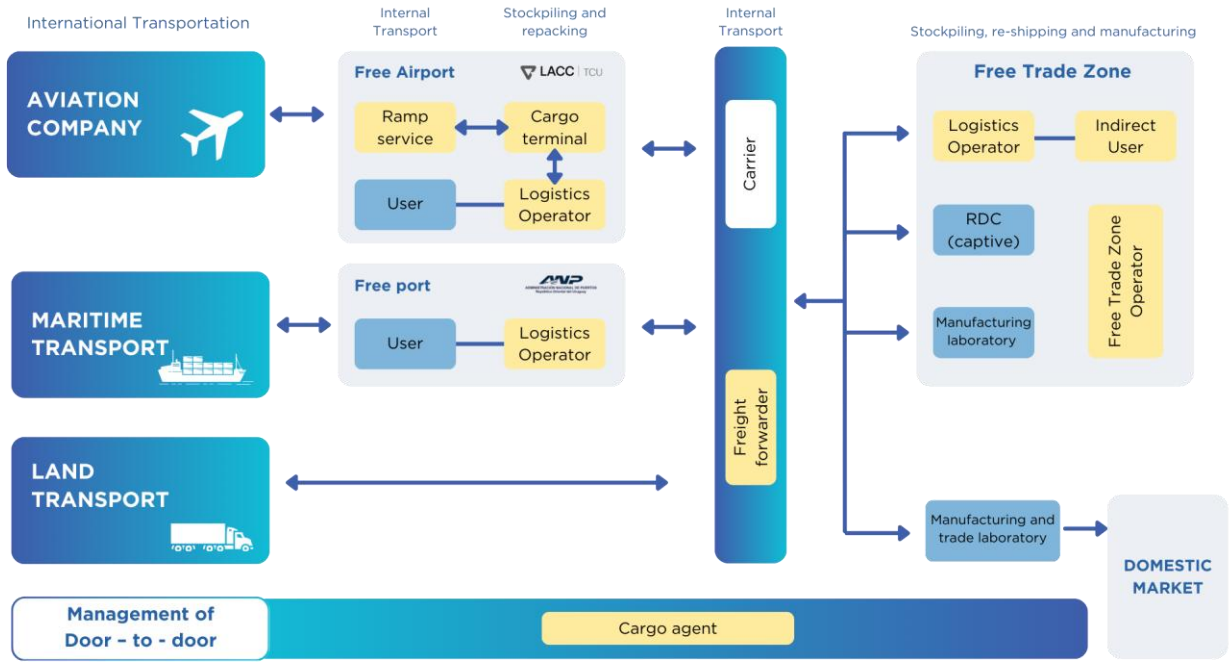
60 companies participated in the pharma hub in 2024, including major multinational companies such as Astrazeneca, CSL Behring and GSK. Most of these companies are foreign multinationals and employed almost 2,000 people in 2024.

2.1.REGIONAL DISTRIBUTION

Uruguay has a long track record in logistics and distribution activities for the region, making it a logistics hub of reference. In the country, the sector involves several operations carried out at ports, airports and free-trade zones.

Pharmaceutical companies are the main players, operating as captive distribution centers or through specialized logistics operators. They are joined by a group of suppliers that complete the chain (carriers, freight forwarders, shippers and specialized cold chain providers).

FIGURE 1
Logistics hub steakholders
Value chain



For the pharmaceutical sector, in particular, the country has positioned itself as a hub for Latin America, offering important advantages for the placement of regional distribution centers. The regulatory framework, geographical location and installed infrastructure appear as Uruguay's main attractions in this segment.

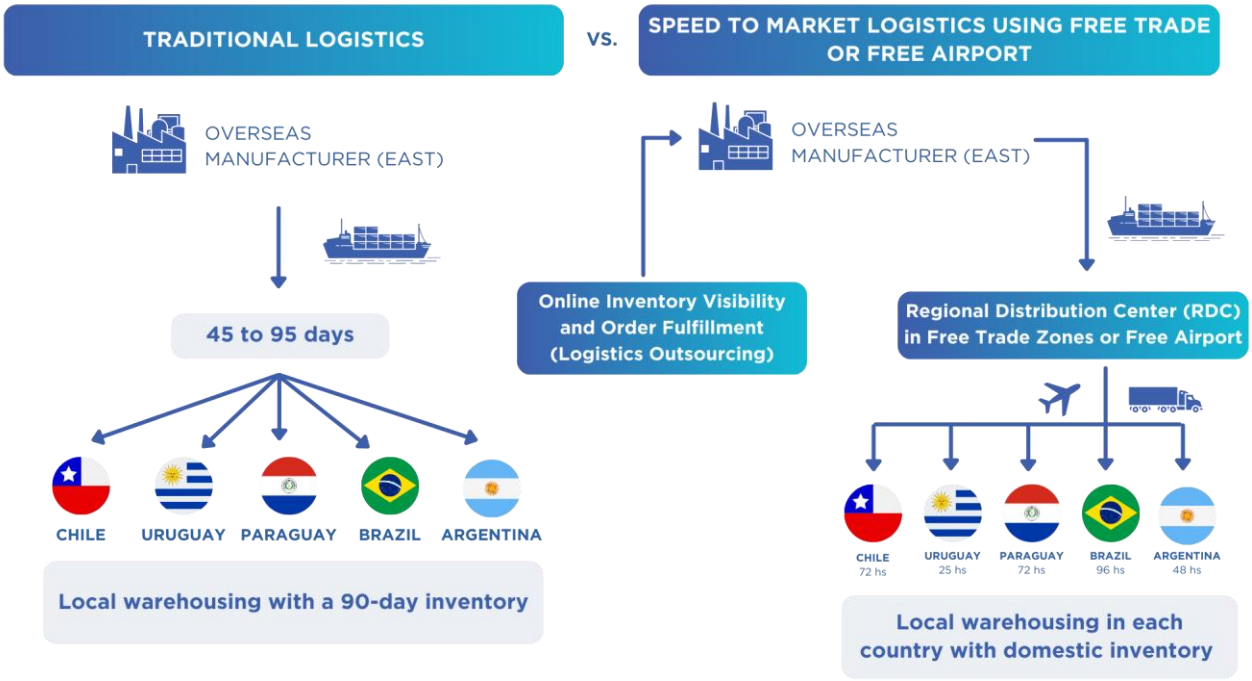
Uruguay offers important regulatory advantages for logistics operations, with incentives for the installation of regional distribution centers (RDCs) and for the handling of goods in transit. These operations are carried out directly by international pharmaceutical companies or through outsourced logistics operators (3PL). These incentives include the free trade zone, free ports and airport, customs warehouses and temporary admission regimes, all of which are detailed in the section: Regulatory Framework.

The country's geographic location allows easy access to the main cities in the region, features two ports at the main gateway to the southern Atlantic coast, with direct access to the Paraná-Paraguay-Uruguay waterway. The modern Carrasco airport is also close to important free trade zones such as Zonamerica and Parque de las Ciencias, as well as Latin America Cargo City (LACC), reinforcing its role as a key hub for the pharmaceutical sector in the region. In this sense, Uruguay is the ideal location to establish a hub in Latin America with the potential to complement the northern hub (Panama).

In addition to purely pharmaceutical activities, there are also those related to the transit of cannabis-based medicines. Uruguayan legislation promotes of these activities in Decree 282/2020, which governs the regulation and control of logistical operations with therapeutic medical cannabis products in customs warehouses authorized by the Ministry of Public Health (MSP) and the Institute for the Regulation and Control of Cannabis (IRCCA). In this way, the warehouses may receive imports -prior authorization from the MSP- to be redistributed in the region.

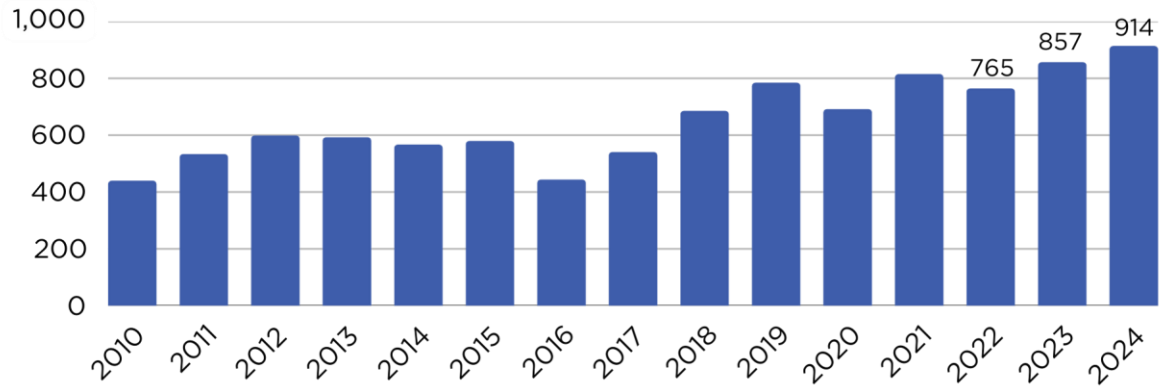
This scheme would facilitate, for example, the entry of medical cannabis products from Uruguay to the Brazilian market, whose imports are specific for each patient. The installation of a hub makes it possible to import complete batches, split them up and carry out operations between Uruguay and Brazil.

FIGURA 2
Traditional logistics vs. STM logistics



The growth in logistics hub activities can be clearly seen in Graph No. 3. Pharmaceutical products Transits ~~of~~ have shown a sustained upward trend since 2010. In the last years, from an average annual transit flow of US$ 500 million to over US$ 900 million in 2024.This business model has established itself as an outstanding alternative for companies serving the sector in the region.

GRÁFICO 3
Pharmaceutical products transits
US$ Millions



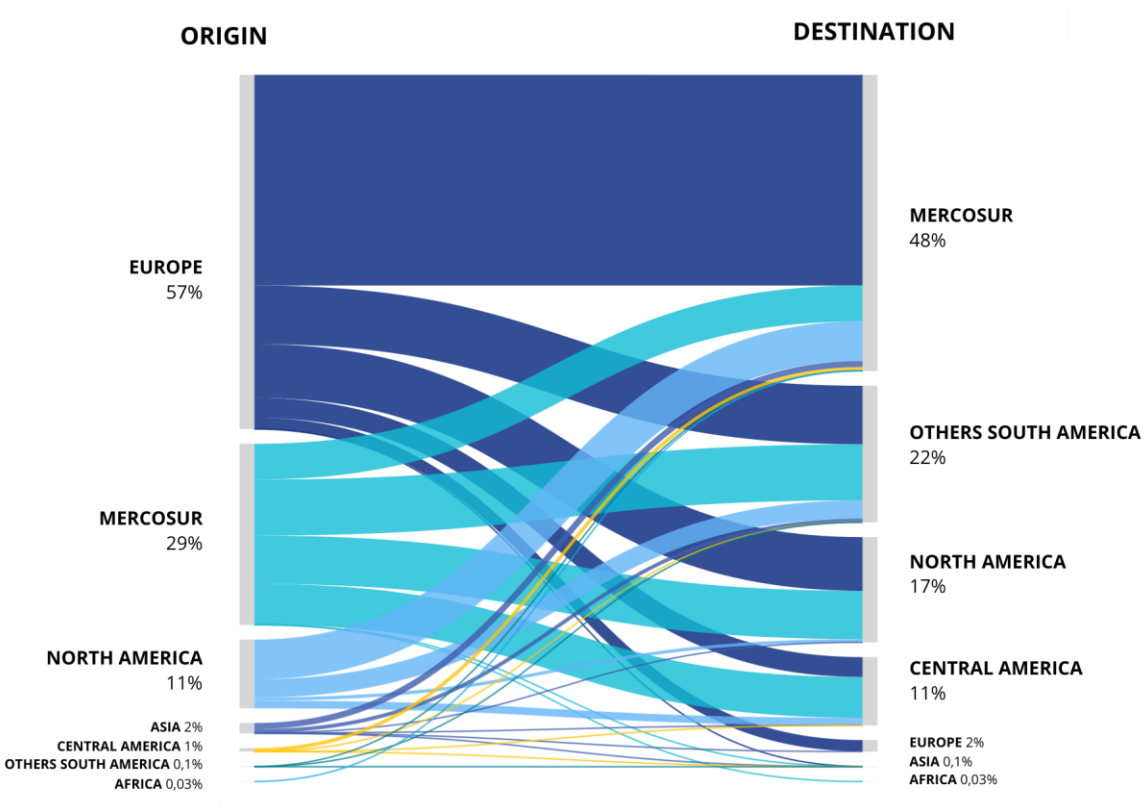
Source: compiled by Uruguay XXI based on information from the National Customs Directorate (DNA). Includes exports similar to transits amounting to approximately USD 10 million per year. These figures do not include HUB activities carried out exclusively within the airport, since the goods do not change customs premises and are not recorded as transits.

The main transit flows of pharmaceutical products enter the country originate outside the region, mainly from Europe and the United States, and are distributed across Latin America, with a focus on Mercosur countries.

As shown in Graph No. 4, 57% of transits during 2024 came from European countries (Italy, Germany, Switzerland, Ireland, France) and 11% from North America (mainly the United States). On the other hand, 29% came from Mercosur, mostly from Argentina.

Regarding the destination of these transits, it is observed that from Uruguay they are distributed across Latin America. Forty-eight percent of the drugs that pass through the country are sent to Mercosur countries. Meanwhile, 22% are sent to other South American countries, 17% to North America (Mexico) and 11% to Central America.

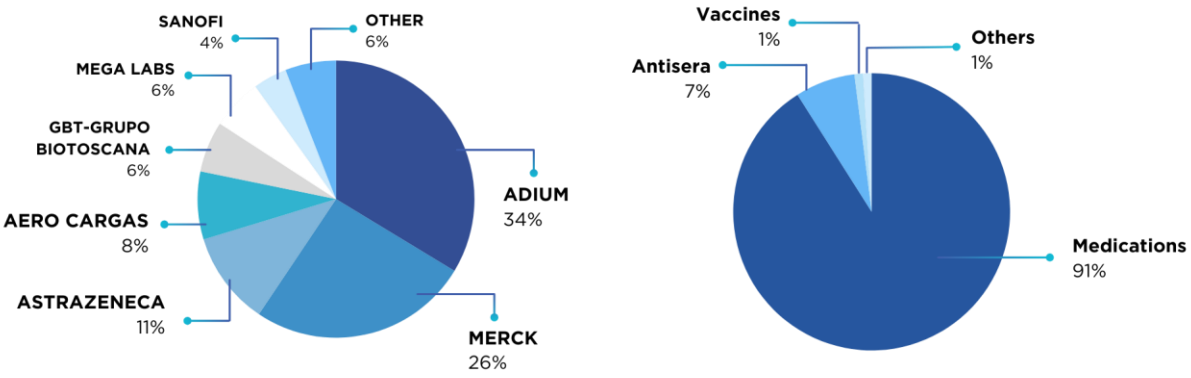
GRAPH 4
Pharmaceutical products -Transit Flows
2024



Source: Compiled by Uruguay XXI based on National Customs Directorate (DNA).

A large percentage of the transits are focused on final products, mainly medicines, as reflected in their distribution during 2024: 91% medicines, 7% antisera, while vaccine transit represent 1%.

GRAPH 5
Pharma hub movements by company and product
2024



Source: Uruguay XXI based on DNA.

In 2024, transit operations were mainly carried out by six companies, which accounted for approximately 90% of operations. Among the companies that exclusively carry out distribution activities, the cases of *AstraZeneca* and *GSK* stand out. There are other companies that also distribute their products to the region from Uruguay, but also carry out other support or production activities (see following sections).

2.2. TRADING AND GLOBAL SERVICE CENTERS

Uruguay has several structural strengths for the development of business-related service activities, generating opportunities for the establishment of captive operations as regional headquarters or service centers (e.g. foreign trade, supply chain, finance and accounting, human resources, customer service, and research and analysis) to support regional and global business.

The country is a reliable platform for the provision of high-quality services at competitive costs. This has allowed international companies to establish service centers, improving their business processes and regional insertion.

In the pharmaceutical sector, some companies with regional distribution centers have incorporated support and/or commercial services activities with or without freight forwarding, such as Merck, Adium, and Knight.

2.3. MAIN COMPANIES

Adium Pharma established in Uruguay (Zonamerica) a regional distribution center from which the company carries out secondary packaging of finished generic drugs and raw materials, as well as their distribution to most Latin American countries.

Headquartered in London, **AstraZeneca** is engaged in the marketing and distribution of specialty pharmaceuticals. Since 2016, its regional distribution center has been located in Uruguay. From here, the company develops a logistics operation for the supply of finished products to Argentina and Brazil. The cargo coming from Europe by air and sea is consolidated in trucks at the hub located inside the free airport (LACC) and then transported by land to Buenos Aires and Sao Paulo.

In 2021 **GSK** installed its Regional Distribution Center in Uruguay. This operation allows the multinational pharmaceutical company to optimize transportation and demurrage costs by consolidating cargo at the Geel hub (Belgium) to be shipped by sea to the Montevideo Free Airport (LACC) for deconsolidation and *cross-docking* and subsequent shipment by land to the end markets in Latin America. In 2022, a hub was added for the distribution of vaccines to Argentina, Brazil, Chile, Paraguay, Bolivia and Uruguay, requiring a management capacity of more than 3,000 pallets per year, equivalent to more than 12 million doses per year. The main advantages of this type of operation include cost reduction and the possibility of reaching almost all of South America by land, improving inventory management and the robustness of the logistics chain.

Abbott is a global healthcare company dedicated to the discovery of new medicines, technologies and ways of managing healthcare. Its product portfolio ranges from nutritional supplements and laboratory diagnostics to medical devices and pharmaceutical therapies. In 2015, the company set up its regional offices in Zonamerica and currently supports all Latin America and the Caribbean in finance, procurement, sourcing and distribution, and quality control activities.

Merck operates in Uruguay as a regional distribution hub and as a provider of regional and global corporate services. The operation has expanded steadily, in line with the company's growth in Latin America. Currently, 175 people work on all its platforms. With respect to logistics, Merck carries out packaging and distribution activities in the country for biotechnology products manufactured in Europe, which are then shipped to various countries in the region. In terms of services, the company has been operating a

corporate services center (*Merck Business Services LATAM*) since 2018, which includes commercial activities, purchasing, finance and administration, supply chain and legal support for the region.

Roche is a Swiss company that has been present in Uruguay for more than 75 years. The company, which currently employs around 150 people in the country for its Pharmaceuticals, Diagnostics and Diabetes Care divisions, also has a Regulatory Affairs Center that handles global operations. From Montevideo, Roche manages the Bolivian and Paraguayan markets and has a regional distribution center that coordinates all logistics operations in Latin America and manages the supply chain of goods from the production centers to its regional subsidiaries.

2.4. DOMESTIC MARKET

Another operation that can be classified within trade and services hub is the domestic distribution of foreign pharmaceutical products. This is often carried out by local representatives of international laboratories that do not have production plants in the country and import their products to supply the domestic market.

In addition to the international pharmaceutical companies that participate in those segments and distribute in the domestic market, there are other international laboratories have only commercial offices in Uruguay. The human pharmaceuticals sector includes *Bayer, Pfizer, Johnson & Johnson or TEVA*. Among the veterinary laboratories, *Biogénesis Bagó, Zoetis and Labyes* are the most important examples.

2.5. SPECIALIZED SUPPLIERS

For the development and deployment of activities related to trade and services, there are different business platforms and specialized suppliers of the pharmaceutical logistics chain. This business and support services ecosystem offers companies setting up operations in the country support throughout the logistics chain according to the degree of specialization required. This contributes to make the country more attractive to this demanding industry, as well as to constantly improve the services provided. The following is a list of those that provide services to foreign companies:

FREE-ZONE OR FREE AIRPORT OPERATORS

Parque de las Ciencias (PDLC)[7] is a logistics, industrial, services and high technology park operating under the Uruguayan Free Trade Zone Regime on an 85-hectare (210-acre) site. It is one of the main regional clusters in life sciences, high technology and value added.

Since 2010, more than 90 companies use it as a platform to develop their regional or global business from Uruguay.

Located in the "innovation hub" of Canelones, it has state-of-the-art infrastructure and buildings designed for highly complex service, commercial and industrial activities.

Among its main companies, **Megalabs** stands out, with a plant of more than 23,000 m^2, its headquarters and a unique R&D center in Uruguay, where it produces sterile, solid and ophthalmic medicines for the whole of the Americas.

Over 80% of the installed companies are linked to life sciences, high technology and high added value; they include pharmaceutical and veterinary laboratories, raw material suppliers, specialized service providers (engineering, clean rooms, packaging, auditing, etc.), health logistics operators and several GMP plants (drugs, injectables, CBD, THC), as well as microbiology, genetic diagnostics, quality control and R&D centers.

In addition to the **BGI** diagnostic laboratory, of Chinese origin, a **Google Data Center** is under construction, reinforcing the park's position as a regional innovation and technology hub.

Zonamerica[8] is the main free-trade zone in Uruguay. With more than 30 years of experience, it specializes in the design and creation of highly competitive business environments in a 90-hectare (222-acre) campus that offers its clients an integral locative solution, based on world-class infrastructure and modern technology services. It stands out for the scalability and flexibility it offers its clients. Zonamerica currently employs some 7,000 people in more than 500 companies. With cutting-edge environmental conditions, it adopts values and carries out concrete actions in response to climate change, such as measuring the carbon footprint, promoting the reuse of surface water from lagoons, managing the park's water footprint and its own water reserve.

[7] Source: Information provided by Zona Franca Parque de las Ciencias. Link
[8] Source: Information provided by Zona Franca Zonamerica. Link

With a strategic location, just 10 minutes from Carrasco International Airport and 40 minutes away from the International Port of Montevideo, the campus is home to nearly 70% of Uruguay's pharmaceutical movements. Pharmaceutical companies, distribution centers, clinical analysis laboratories and other players in the Pharma and Life Sciences industry find in Zonamerica the right solution to develop their business and operate from the campus to the region. Some of the industry companies currently operating from Zonamerica are Adium Pharma, Merck, Va-q-tec, Abbot, Boehringer Ingelheim, Sanofi, Fresenius Medical Care, Shimadzu and Eurofarma. A robust ecosystem in which logistics activities, regional distribution centers, industrial or value-adding tasks, as well as the centralization of regional or global services are developed.[9]

Latin American Cargo City (LACC) is the only Free Airport in South America, an unprecedented regime in the region, comparable to world-class logistics hubs such as Dubai or Changi in Singapore. Part of Corporación América Airports, the world's largest airport operator, it holds the airport concession until 2053.

As the only air cargo terminal in the country, it handles 100% of imports, exports and re-shipments. It is the only logistics operator operating within the customs area, which represents a key strategic advantage. From a single point of control, it offers multimodal capabilities, integrating air, sea and land transportation according to its customers' needs.

Its strategic unit LACC-PHARMA provides regional distribution services in multiple verticals: finished and semi-finished pharmaceuticals, medical devices, raw materials and animal health, among others. It also operates in sectors such as High Tech, E-commerce, Textile and Cargo Terminal.

It currently collaborates with global companies such as AstraZeneca, GSK, Roche, CSL Behring and Servier, supporting its distribution to Latin America and other markets.

In line with its commitment to the industry, it has first class infrastructure, certified in GxP and aligned with the highest international quality and control standards, which reinforces its value proposition in the handling of sensitive and high value products.

The regime allows companies to establish a tax domicile within the property and to access a 100% tax exemption on the purchase and sale of products transiting through the hub.

[9] For more information see here.

This consolidates the company as a key logistics platform for connecting global industry with Latin America, integrating efficiency, innovation and strategic vision.

LOGISTICS OPERATORS

Selenin is a logistics operator specialized in pharmaceutical products (medical equipment, diagnostic reagents, therapeutic devices, cosmetics, nutritional supplements, food, etc.) founded in 2008. It operates under the free trade zone regime and is located in the Parque de las Ciencias. Its services range from storage of raw materials and pharmaceutical specialties to secondary packaging of finished products.

Costa Oriental, headquartered in Zonamerica and Zona Franca Colonia, is a major logistics operator in Uruguay. The company currently operates as a regional distribution center for international companies in a wide variety of sectors (pharmaceutical, chemical, electronics, retail, response and raw materials), optimizing logistics costs by combining regional inventory from Brazil, Argentina, Chile, Paraguay and Uruguay in its facilities.

Grupo RAS is an international company specialized in the planning and management of logistics services since 1991. The company offers customized solutions in infrastructure and warehousing, customs, regional and international distribution, sea, air and land transportation, foreign trade services and industrial projects.

Farmalog is a Uruguayan pharmaceutical warehousing and logistics company founded in 2010. A leader in the sector, it provides services to national and multinational companies. It has 6,000 m^2 (64,500 sq-ft) of storage, eight cold chambers and quality control laboratories to meet the needs of the pharmaceutical sector. In 2019, it created Farmalog Logística Internacional, which includes a 3,000 m^2 (32,250 sq-ft) storage plant and a quality control laboratory in a free trade zone.

Farmared-Logired, a leading logistics services company for pharmaceutical, allied and consumer products, has been committed to excellence since its foundation in 1997. In 2001 it incorporated the Logired brand to serve consumer products and launched its logistics center in 2013. Focused on continuous improvement, it has implemented technologies and automation to optimize logistics and administrative processes. A pioneer in sustainability, in 2023, it published its first report based

on GRI Standards. In short, Farmared-Logired stands out as a key strategic partner for companies seeking to outsource their logistics services, offering quality, innovation and reliability at every stage of the supply chain (B2B and B2C) with a strong commitment to sustainability and corporate responsibility.

Supramar is an Uruguayan company with 25 years of experience that offers logistics solutions to national and international companies under the free port and free zone regime for goods in transit from its domestic warehouse for nationalized products, as well as local distribution (only in Uruguay) using its own fleet of trucks.

COLD CHAIN PACKAGING

Envirotainer is a company specialized in the transportation of pharmaceutical products that require temperature control, with the objective of guaranteeing their integrity and efficiency throughout the entire logistics chain.

With a 40 years history in the industry, the company has established working relationships with some of the world's leading pharmaceutical companies. Its offering includes a wide range of cold chain solutions, as well as shipment monitoring services, supported by an operational network with global presence, allowing products to reach their destination at the required time and conditions.

In terms of sustainability, Envirotainer has adopted goals aligned with scientific criteria to reduce its carbon footprint. This orientation not only seeks to reduce the company's own emissions, but also to contribute to the reduction of its customers' emissions. To this end, it uses a data-driven approach, with transparent reporting and calculation tools to measure the environmental impact down to the level of emissions per unit of product.

The company is involved in all stages of the logistics process, from the shipment of materials for research and development to commercial distribution. Its operational capacity allows it to transport both large volumes and individual samples, meeting various needs within the life cycle of pharmaceutical products.

Cold Chain Technologies is a global provider of advanced thermal packaging solutions for the transportation of temperature-sensitive drugs, vaccines and biologics, with a primary focus on the pharmaceutical industry.

In Uruguay, the company operates its regional distribution center through the logistics operator Farmalog, located in **Zonamerica**, and also produces thermal insulation materials in the department of **Canelones**.

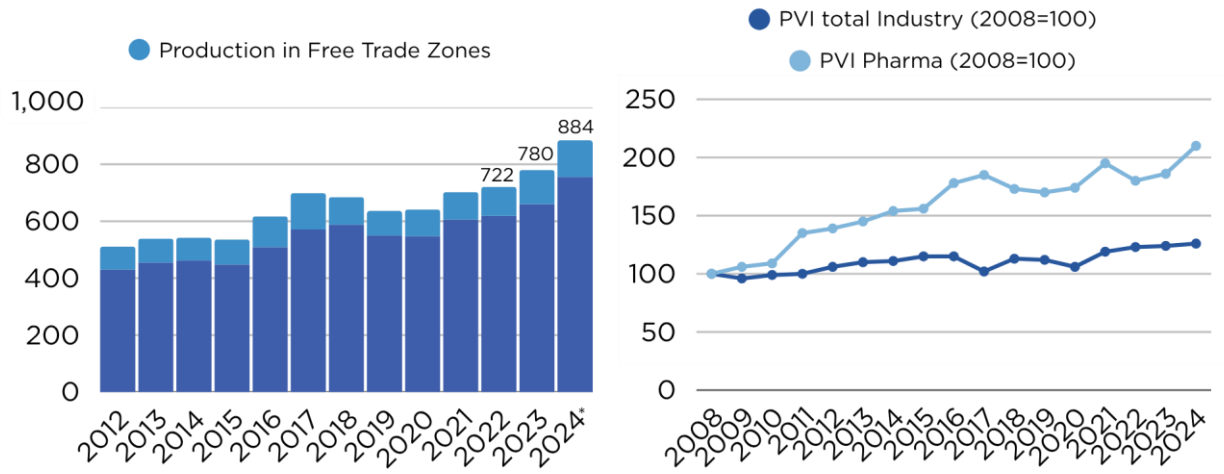
In 2024, Cold Chain Technologies acquired and integrated **Exeltainer.** It is currently reinforcing its commitment to sustainability by incorporating the British company **Tower Cold Chain** into its group of companies.

3. PRODUCTION AND INNOVATION HUB

Uruguay's pharmaceutical industry, in terms of both human and veterinary drug production, is one of the most important sectors of the country's industrial core. According to preliminary estimates for 2024, the Gross Value of Production (GVP) of this industry totals US$ 884 million.[10]

To measure the relevance of the sector, it is estimated that its production represents 8% of the industrial Gross Domestic Product (GDP), which is equivalent to 0.8% of the total GDP (2024). When considering only the export segment, it is observed that in 2022 the added value of the pharmaceutical sector represented 1.1% of the exporting Gross Value Added (GVA) and 16% of the industrial exporting GVA. This translates into a value added of US$ 198 million.[11]

GRAPH 6
Gross Value of Production and Physical Volume Index
US$ millions and base 2008=100



Does not include production of medical devices.
Source: Uruguay XXI based on Exante and the National Statistics Institute (INE, for its acronym in Spanish).
*Estimated for 2024

The sector has shown an important dynamism in recent years, driven by both the growth of the domestic market and the increase in exports. As shown in Graph No. 6, the volume of production grew well above that of the industry as a whole. This dynamic can be largely

[10] Excludes exports of medical equipment.
[11] For more information: Gross Value Added in Exports - Uruguay XXI

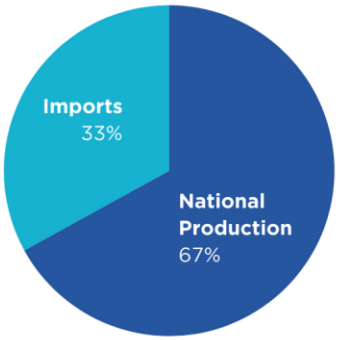
explained by investments in the sector, which since 2010 topped US$ 526 million and included the construction of new plants, as well as the expansion of existing plants.[12]

The total size of the Uruguayan pharmaceutical market (production and imports) in 2024 was US$ 1,327 million, of which 67% corresponded to domestic production and the remaining 33% to imports. These values correspond to both human and animal health products.

The segment of medicines for human use is the most significant in Uruguay's pharmaceutical industry accounting for 83% of domestic consumption and 71% of exports.

TABLE 2
Pharmaceutical Market Structure 2024
US$ millions

	Total	Human	Animal
Domestic production*	884	706	178
Imports	444	359	84
Market size	1,327	1,065	262
Domestic use	1,010	839	171
Exports	318	226	91



Source: prepared based on the Chamber of Pharmaceutical and Allied Specialties (CEFA, for its acronym in Spanish), Customs and Exante. Note (*): Estimate based on Exante projections and export data from Free Trade Zones.

Including exports of medical devices (US$ 44 million), the Gross Value of Production totals US$ 928 million and exports reach US$ 362 million.

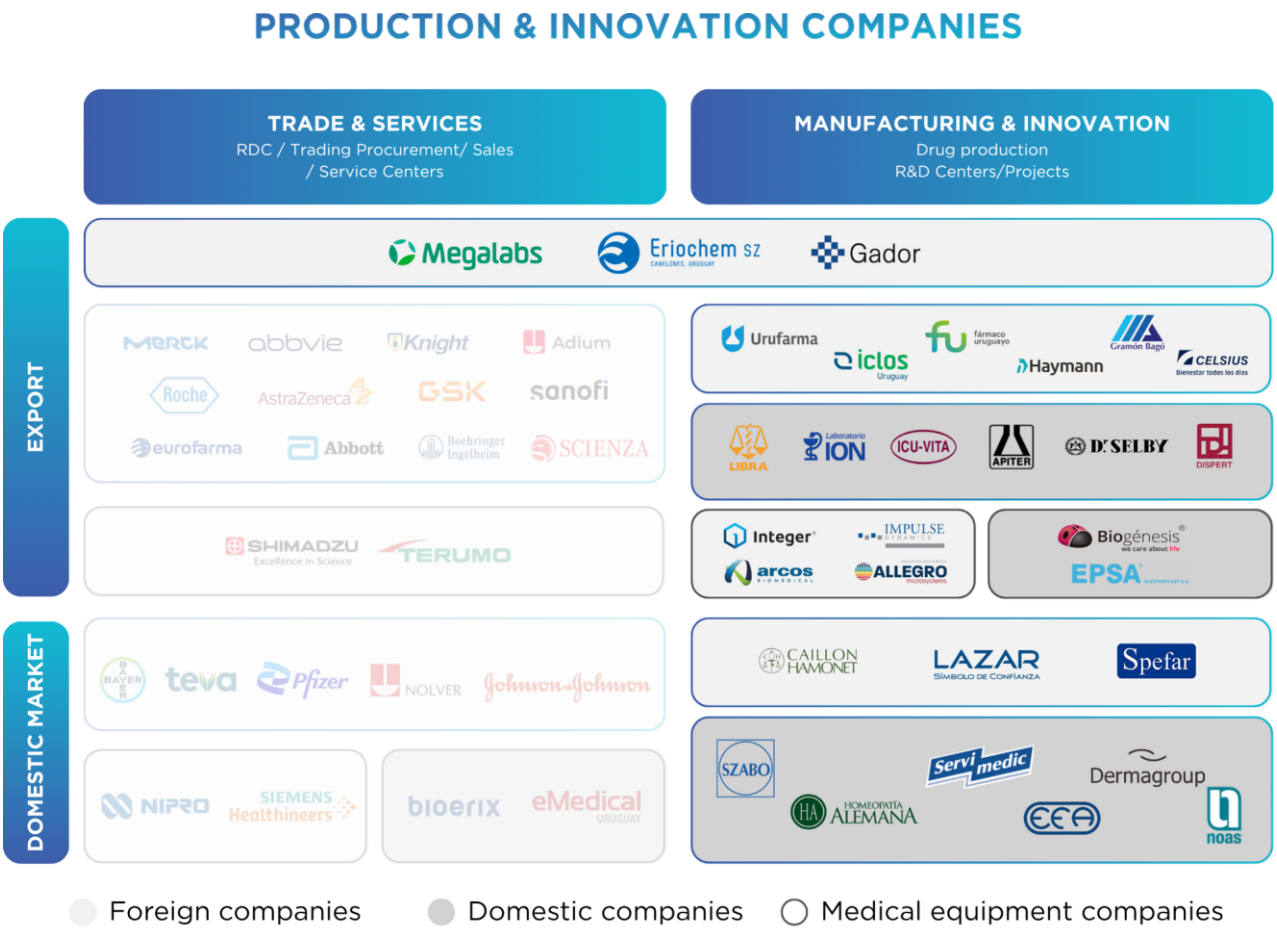
3.1.HUMAN USE

The human drug manufacturing segment is the one with the longest tradition in Uruguay. The first companies began to operate in Uruguay in the late 1960s. Over the last few years, following a trend that is also global, multiple mergers and acquisitions (*M*&A) have taken place in the local market, with national and international companies absorbing smaller national laboratories.

[12] Source: Ministry of Economy and Finance - Comisión de Aplicación de la Ley de Inversiones (MEF - COMAP), data as of Sep-2024 || Investments by Mega Pharma, for US$ 110 million, and Eriochem, for US$ 7.5 million, both in free trade zones, are also accounted for.

Within the pharmaceutical industry, drugs for human use account for approximately 78% of total production.[13]

As for the industry scheme, pharmaceutical laboratories for human use are mainly composed of multinational companies that manufacture globally patented products or local companies that manufacture and/or sell similar or generic pharmaceutical products. The former are grouped in the Cámara de Especialidades Farmacéuticas y Afines (CEFA) and the latter are grouped in the Asociación de Laboratorios Nacionales (ALN).

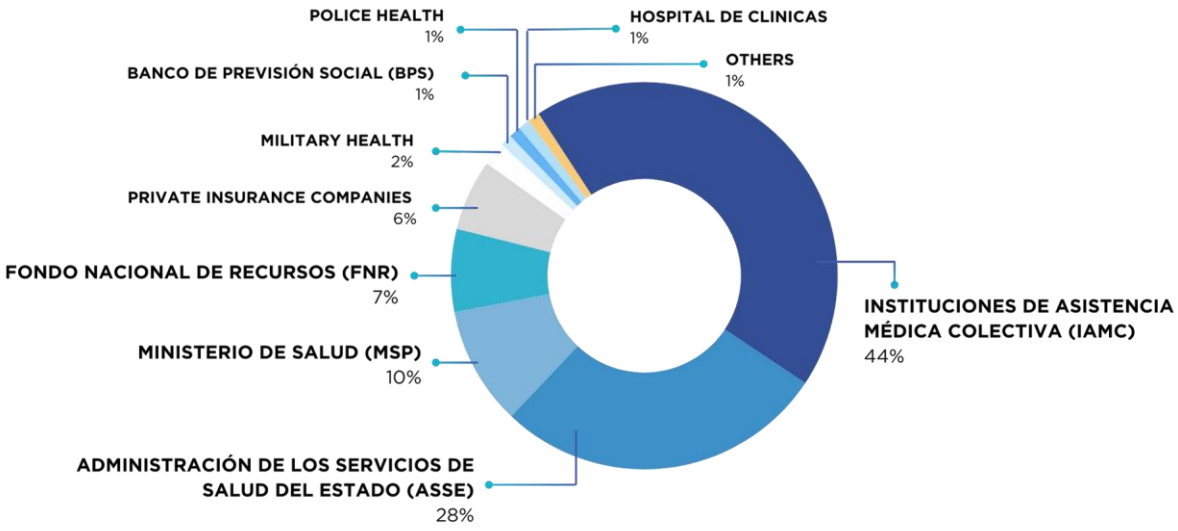


The sector's main customers are mainly the foreign market, the public health system, private health service providers (mutual insurance companies) and pharmacies.

[13] See previous section.

With regard to drug expenditure[14], the role played by the different health system actors in Uruguay is very important. The National Integrated Health System (SNIS) provides coverage to all inhabitants through a mixed public-private system. The main public sector healthcare organizations are the State Health Services Administration (ASSE), the Military Health Service, the Police Health Service and the Hospital de Clínicas. The private sector is made up of Collective Medical Assistance Institutions (IAMC) and private insurance providers.[15]

GRAPH 7
Drugs and pharmaceutical supplies expenditure by health care provider



Source: Health Accounts - MSP.

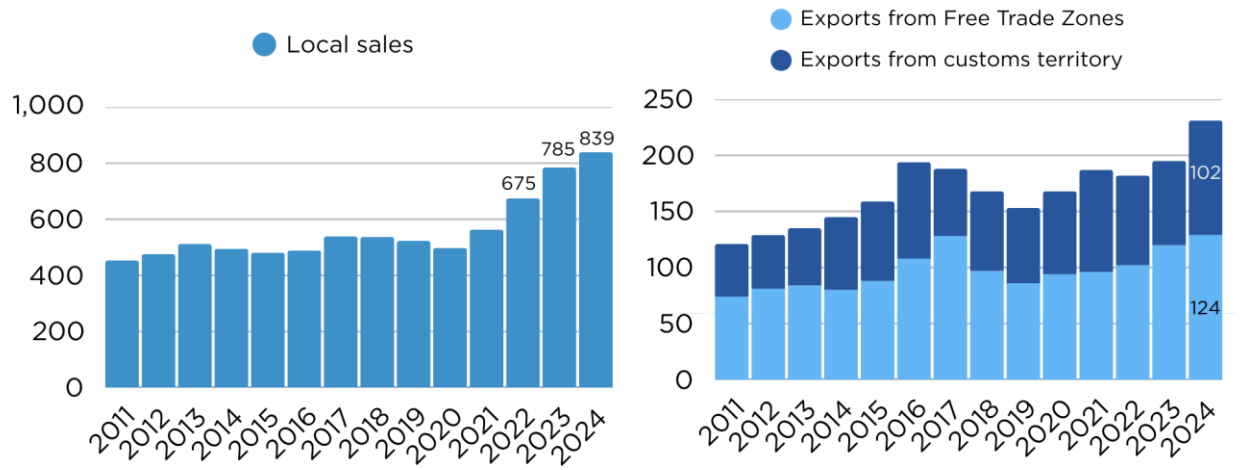
Uruguay's national drug regulatory authority is the Medicines Department of the MSP. This office grants authorization to the companies in charge of ~~the~~ importing, representing, production, processing and marketing of medicines, which must be registered. There are approximately 120 companies authorized by the MSP for these purposes.[16]

Some 39 companies participated in the manufacturing sector in 2024; this figure has remained stable in recent years because, although there is a trend towards the purchase of domestic laboratories by foreign, ones the former may remain as an independent business unit of the latter. Of the total number of manufacturing companies, about 40% are exporters and the rest exclusively serve the domestic market.

[14] Health Accounts 2020-2021: Health Expenditure and Financing in Uruguay - MSP
[15] According to the latest available data from the Ministry of Public Health (MSP), in 2021, spending on drugs and pharmaceutical supplies represented 12% of the total current expenditure of the health system. This implied an expenditure of US$ 645 million, equivalent to 82% of local market sales.
[16] The list of medicines, together with the responsible laboratories, is available online: Link.

Sales flows, both to the domestic and foreign markets, have grown strongly in recent years. Local sales have increased considerably in the last two years, reaching US$ 839 million in 2024.

GRAPH 8
Local Sales and Exports – Human Use Medicines
US$ Millions



Source: own compilation based on CEFA and DNA.

After three consecutive years of decline, exports of pharmaceutical products for human use recovered dynamism in 2021 and maintained a growing trend in the following years, with a particularly outstanding growth in 2024. Exports from free trade zones were very important in this dynamic, accounting for 55% of external sales of the human sub-segment. This way, 32 companies participated in the sector's exports in 2024, which totaled US$ 226 million, 1.7% of the country's exports.

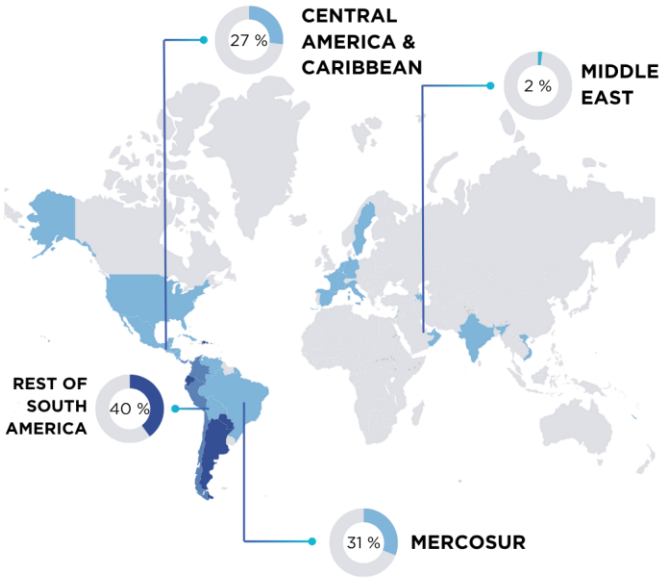
Since 2010, exports of pharmaceutical products for human use have consistently exceeded US$ 100 million, with a special boost from the installation of several companies in Zonamerica and Parque de las Ciencias. The free zone regime allowed for dynamic operation and significant synergy between companies in the sector.

Exports from free trade zones are products that enter under the transit regime and undergo some intermediate processing before being exported to other countries.

In total, exports of pharmaceuticals for human use increased from US$87 million in 2010 to US$226 million in 2024. The main exporting company, *Megalabs*, accounted for more than half of external sales in 2024. At the same time, 93% of exports were made by five companies and 97% were made by companies of foreign origin.

GRAPH 9
Human use pharmaceutical exports by company and destination
Share (US$ millions), 2024

Companies	2022	2023	2024
MEGA LABS	54%	61%	55%
URUFARMA	13%	10%	17%
ICLOS URUGUAY	13%	13%	12%
ABBVIE	5%	6%	5%
FARMACO URUGUAYO	3%	3%	4%
LABORATORIO GADOR	4%	2%	2%
LABORATORIO LIBRA	2%	2%	2%
TERRY	1%	1%	0,5%
GRAMON BAGO	0,4%	0,2%	0,4%
LABORATORIOS DISPERT	0,5%	0,2%	0,3%
Total (US$ millions)	**183**	**191**	**226**



Rest of Asia (0,2%), North America (0,2%), EU (0,02%) y Rest of Europe (0,003%)

Source: Uruguay XXI based on DNA.

Nearly 85% of exports in the human use segment corresponded to medicines, which include a varied range of applications and uses. Contraceptives accounted for 9% of exports, while antisera accounted for 5%.

In addition, exported products are mainly directed to the region. In 2024, more than 70% of total sales were destined for South America, with Argentina, Ecuador and Paraguay as the main destinations. Central America also had a relevant share, with 27% of the total in 2024. The Dominican Republic, Panama and Honduras were the main markets in this region.

Today, the main exporters are predominantly foreign-owned companies. The key players are outlined below.

Megalabs **Megalabs** is a multi-Latin company with 17 production plants and six R&D centers in Latin America. In Uruguay, the Megalabs campus, located in Parque de las Ciencias, consists of a production plant, a development center that carries out R&D projects for the entire region, a quality control sector and a corporate center where tasks in administrative, financial and technological areas that impact the company's operations throughout Latin America are carried out. The Megalabs campus in Uruguay is a space that

favors the exchange of knowledge, the technical update and provides a unique infrastructure capable of hosting highly complex industrial projects.

Megalabs' presence in the country was also strengthened through the acquisition of local laboratories such as **Celsius, Spefar, Iclos and Haymman**, all of which carry out production activities focused not only on the domestic market, but also on the regional market.[17]

Eriochem is a pharmaceutical company dedicated to the synthesis of active pharmaceutical ingredients and the production of liquid and lyophilized injectables. The company was born in Argentina and over time has expanded to produce oncology drugs for Latin America, Asia Pacific, Europe and North America.

In Uruguay, Eriochem performs secondary packaging and analysis of oncology pharmaceuticals for export to several countries. The company has a pre-filled syringe plant in the Parque de las Ciencias free trade zone, as well as its administrative and operations offices for the region.

Urufarma Founded in 1946, **Urufarma** is an Argentine capital company with a modern industrial complex (GMP + GLP certified) for the manufacture of oral contraceptives and other hormonal products. In addition to having a strong impact on the local market, a large part of its production is exported to countries such as Argentina, Chile, Colombia, Paraguay, Peru, Mexico and Venezuela, among others. In April 2024, the company inaugurated a modern industrial complex for the production of oncological drugs with an investment of almost US$ 40 million.[18]

3.2. MEDICAL DEVICES

In addition to drugs, there are some companies that develop, prototype, produce, and export implantable devices from Uruguay.

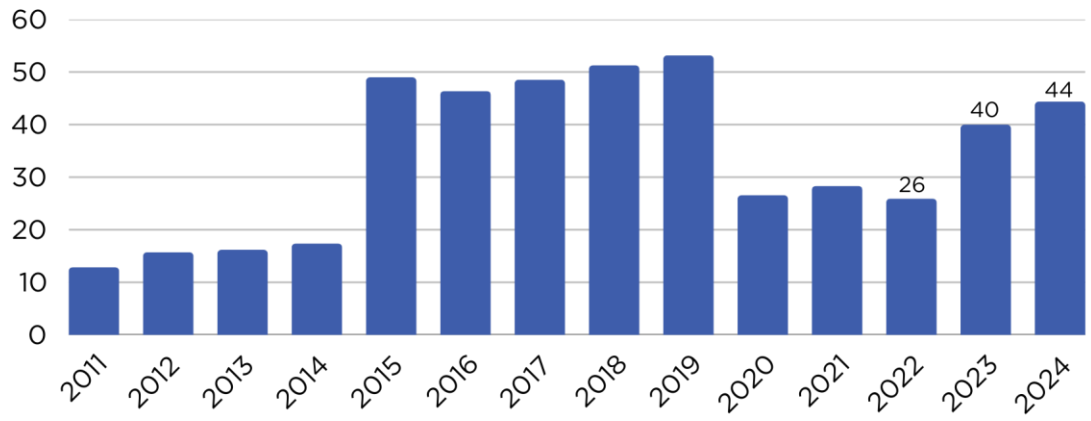
The significant increase in exports of these products is largely due to the company Integer, which from 2015 entered the U.S. market, after its clients obtained FDA approval for their medical products, with sales reaching almost US$ 50 million in 2019. The decline in the export

[17] In February 2023, IDB Invest approved a 10-year loan of up to US$70 million to Megalabs. The loan will finance investment projects in eight countries in the region (including Uruguay) that include the expansion of existing pharmaceutical production plants, modernization and expansion of antibiotic plants, investments in efficiency programs, good laboratory practices and good manufacturing practices, and the purchase of machinery and equipment: Link

[18] "Laboratorio Urufarma inaugura moderno complejo industrial" - El País

stream started in 2020 had two reasons: (i) the incidence of COVID-19 that generated the cancellation or delay of surgeries, impacting the demand for its products, and (ii) a change in the operations strategy of this company that focuses more on exporting the design of devices and low volume production, transferring the high-volume production to other plants of the company. These design services are not reflected in exports of goods. Despite this context, in the last year exports of implantable devices grew 11% to US$ 44 million.

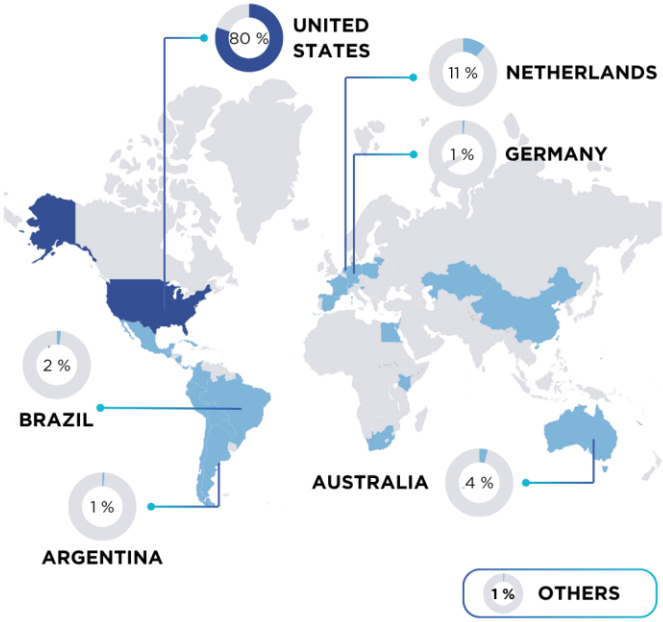
GRAPH 10
Medical devices exports
US$ millons



Source: Uruguay XXI based on DNA.

GRAPH 11
Exports by company and destination
Share (US$ millions), 2024

Companies	2022	2023	2024
INTEGER	83%	89%	94%
ELECTROPLAST S.A.	12%	9%	4%
BIOGENESIS	2%	1%	1%
Total (US$ millions)	**26**	**40**	**44**



Source: Uruguay XXI based on DNA.

As for the destinations where these products are placed, developed countries stand out as the main buyers of the devices produced by Integer. Electroplast and Biogenesis focus on the region.

In total, these exporting companies directly employ around 720 employees. Their major characteristics are highlighted below:

Integer® With more than 35 years in the market, Integer Montevideo (formerly CCC Medical Devices) is dedicated to the design and manufacture of implantable medical devices. The company serves mainly the US market and has more than 250 employees, of which 60 are engineers (electrical, systems, mechanical and chemical) dedicated to R&D activities.

EPSA® Electroplast S.A. is a worldwide supplier of medical devices for hospital services in different specialties. Its products are used in anesthesiology, urology, surgery, gastroenterology, emergency, adult and pediatric intensive care. In its factory in Uruguay, the company employs more than 130 people, being one of the national companies in its field with ISO and EC (European Community 93/42/EEC) certification.

Its export markets are Brazil, Argentina, Germany, Egypt, the United States, Kazakhstan, Chile, Nicaragua, Ecuador and Poland, among others.

Biogénesis® we care about life

It is engaged in the design and production of medical devices for oxygen saturation, temperature, electrocardiogram, invasive arterial pressure, non-invasive arterial pressure and electroencephalogram. The company currently employs about 20 people and has two lines of business: the manufacture of original and compatible products. In both cases they are positioned as a company strongly focused on quality. Biogenesis exports to more than 70 countries through a wide network of distributors (345) worldwide.

In relation to the manufacture of medical devices, there is an incipient number of companies dedicated to the **design of** specific **software** for this segment. The following are some of the most relevant ones:

IMPULSE DYNAMICS

Impulse dynamics is an international company based in New Jersey (USA) that is a leader in the development of innovative therapies for heart failure. The company's cardiac contractility modulation technology has proven to be effective in improving heart failure symptoms and patients' quality of life. Impulse Dynamics has its team of 20 people in Uruguay dedicated to the design, development and prototyping of implantable devices.

FOCUS

Focus is focused on generating value for industrial and technological companies, providing design and development solutions for software, hardware and automation. Focus accompanies its clients in the integral development of electronic systems: from the definition of requirements, through the design of the hardware architecture, the design of PCBs and the manufacture of prototypes. The skills of the software development team are complemented by in-depth knowledge of hardware design and communication systems, enabling results that balance production costs with performance and energy efficiency. With a team of more than 30 engineers and project managers with experience in neuromodulation, having worked on several implantable pulse generators for different therapies and on novel portable neurostimulators for bioelectronic medicine.

hattrick IT Since 2014 Hattrick has been designing and building software for leading medical device and digital therapy companies, bringing nearly a decade of innovation and experience to the forefront of healthcare technology. The companies' team takes an agile

approach to navigating the complex landscapes of FDA, HIPAA and other regulatory requirements in healthcare, ensuring that projects not only meet the highest internationally mandated standards, but do so with unmatched efficiency and adaptability. It specializes in seamlessly connecting software with a wide range of medical devices and *wearables* through *Bluetooth*, WiFi, RFID and NFC technologies, ensuring innovative and securely integrated solutions.

3.3. VETERINARY USE

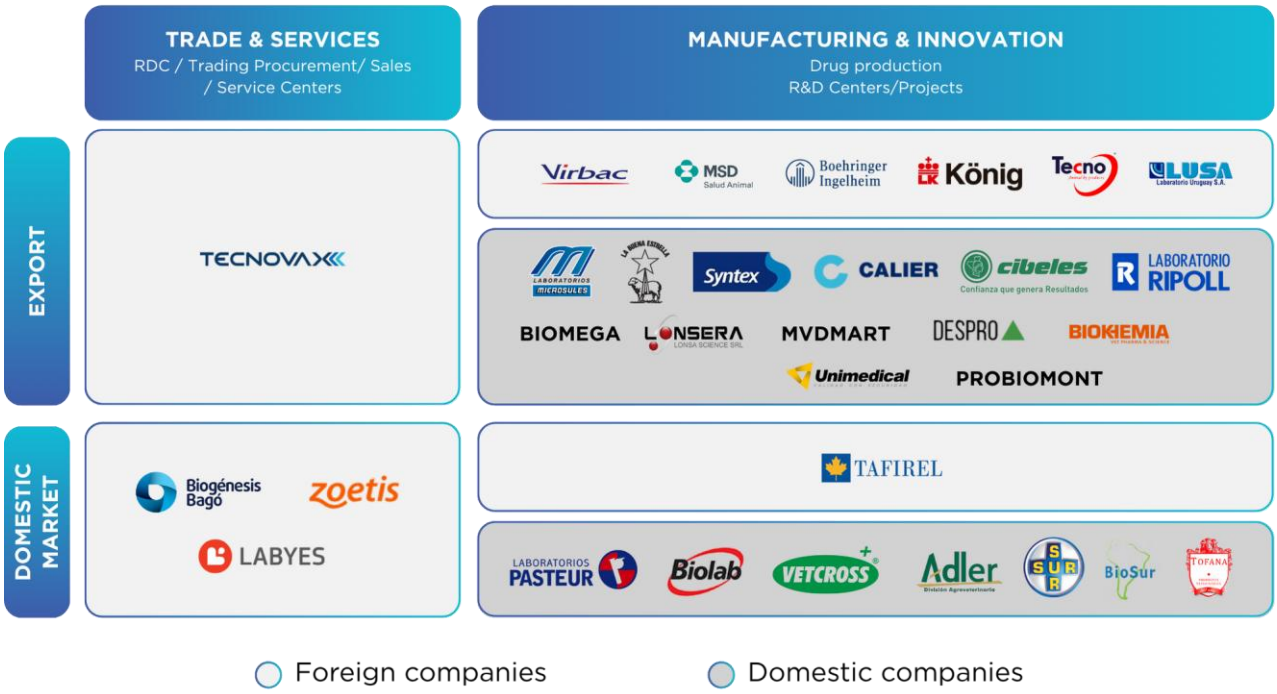
Uruguay's veterinary drug manufacturing segment is primarily focused on the production and commercialization of broad-spectrum treatments for both companion animals and livestock involved in the country's key productive sectors—such as cattle, horses, and sheep.

The health authority for veterinary drugs is the Ministry of Livestock, Agriculture and Fisheries (MGAP) through its Veterinary Laboratories Division (DILAVE). Companies engaged in the processing, fractioning, importing and distribution of veterinary products must request authorization from this office. Currently, there are 134 companies registered in these areas.

Production in Uruguay is carried out by 25 companies[19] that combine the production of a wide range of products such as medicines, vaccines as well as serums and proteins for animal use.

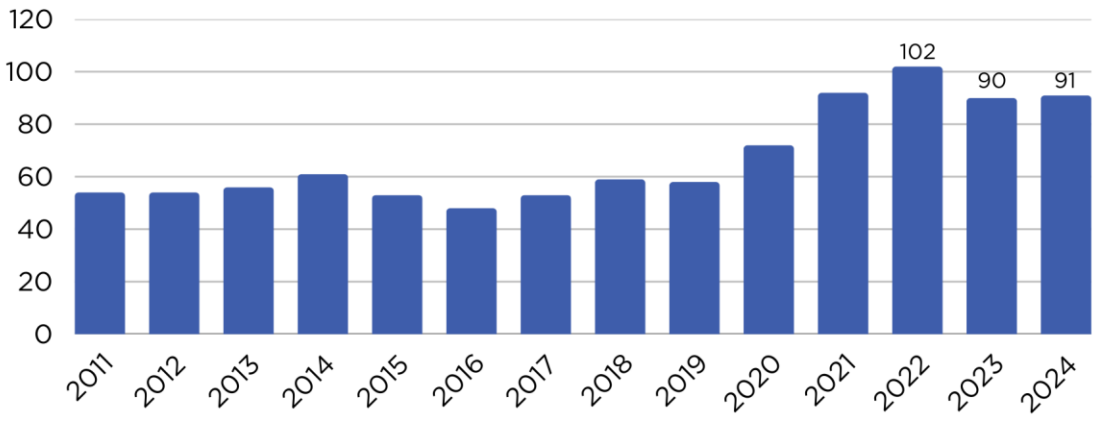
[19] Excluded from this group are companies that, although they are qualified to produce veterinary specialties, this is not their main line of business. For example, pharmaceutical laboratories for human use, producers of food or cleaning products.

VETERINARY COMPANIES IN URUGUAY



The animal manufacturing segment represents 22% of the total production of pharmaceutical products. In 2024, 28 companies exported a total of US$ 91 million.

GRAPH 12
Veterinary exports
US$ millons



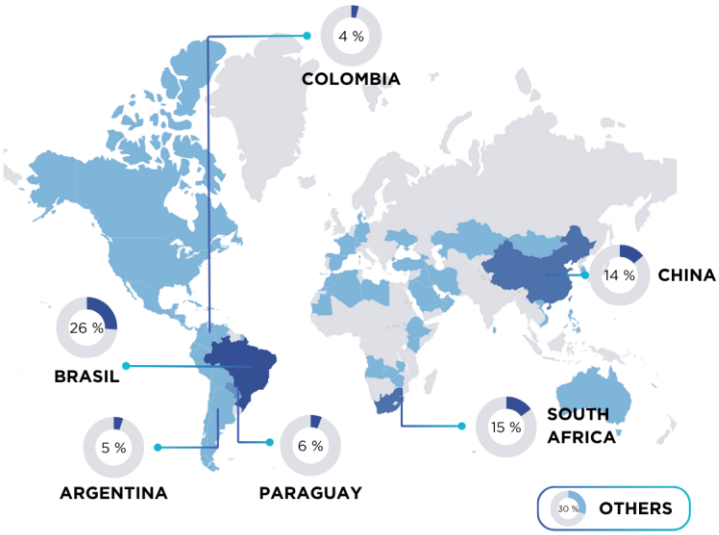
Source: Uruguay XXI based on DNA.

The veterinary segment also shows a relative concentration of exporting companies, although less than in the human segment. In this case, five companies accounted for 72% of last year's exports.

Veterinary pharmaceuticals reached 63 markets. Approximately half of the total went to South America, with Brazil, Paraguay and Argentina as the main destination markets.

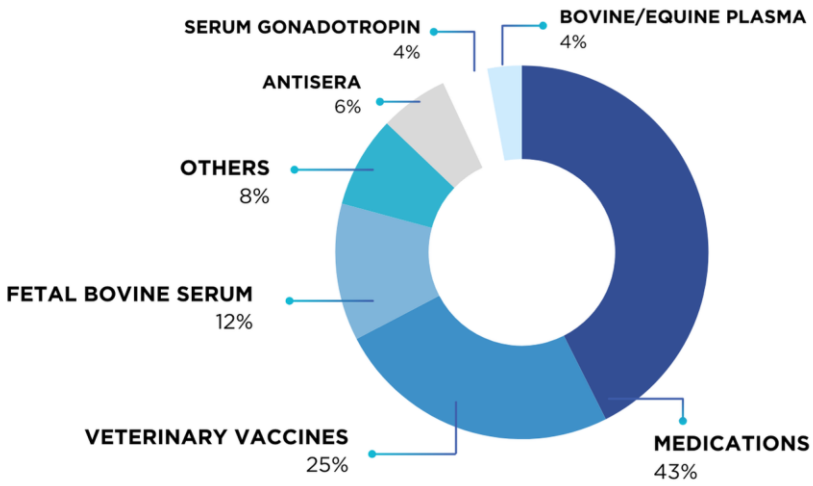
GRAPH 13
Veterinary exports by company and destination
Share (US$ millions), 2024

Companies	2022	2023	2024
MICROSULES	31%	36%	39%
VIRBAC	17%	14%	14%
PRONDIL	4%	7%	9%
LAGE Y CIA.	3%	4%	6%
DESPRO	4%	4%	4%
MVDMART	16%	15%	4%
READYPOINT	3%	3%	3%
LA RESERVA TRADING CO	1%	3%	3%
TECNOBLEN	6%	4%	3%
LABORATORIO BIOMEGA	2%	1%	2%
Total (US$ millions)	**102**	**90**	**91**



Source: Uruguay XXI based on DNA.

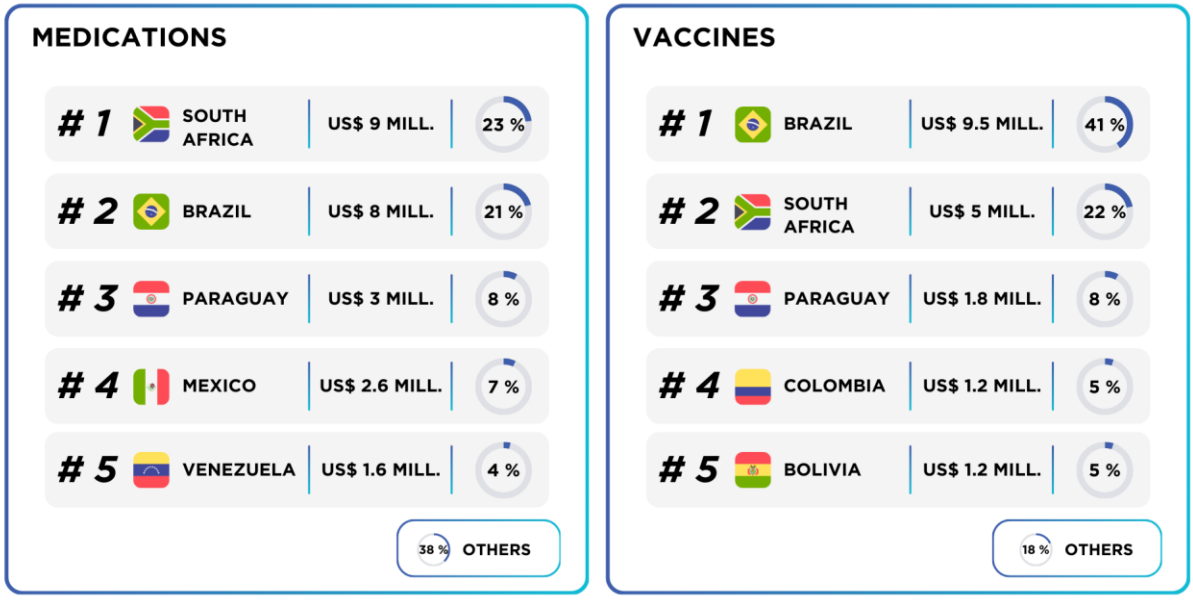
GRAPH 14
Veterinary exports by product
Share (US$ millions), 2024



Source: Uruguay XXI based on DNA.

In terms of products, the segment presents a wide variety, ranging from drugs themselves to vaccines, in addition to fetal serums, plasma and PMSG, hormones such as serum gonadotropin.

GRAPH 15
Veterinary pharmaceuticals exports destinations by product
2024



Source: Uruguay XXI based on DNA.

The main companies are both domestic and foreign and produce a variety of veterinary products. The following is a brief description of the most relevant ones.

MSD - Prondil S.A. is a biotechnological laboratory specialized in the development and production of vaccines for veterinary use. With a clear export profile (its products are marketed in more than 20 countries in Latin America, Africa, Europe and the Middle East), Prondil has adopted the most relevant and demanding international standards in the field of biologics (CFR of the United States, Ph. Eur., OIE, WHO and GMP of Mercosur). Its production plant, located in Montevideo, has state-of-the-art equipment and facilities that guarantee biosafety and environmental care.

Virbac Uruguay (until 2010, Laboratorio Santa Elena S.A.) has as its main activity in the country the production, distribution and export of animal health products. In addition to a production plant, Virbac Uruguay has a research, development and production center for biologicals (vaccines).

Laboratorios Microsules has been operating in the local and international market for more than thirty years, manufacturing, synthesizing, marketing and distributing veterinary drugs. The company has six production plants in Canelones, which allow the export

of its products to more than 40 countries in Africa, America, Asia, Europe and the Middle East, and a state-of-the-art experimental field with animal wellbeing certification.

3.4. R&D ECOSYSTEM + NEW DEVELOPMENTS

The activities linked to the production of the pharmaceutical sector have a dynamic support ecosystem for innovation that collaborates in the incorporation of new product lines or in the implementation of innovation projects between companies and research groups.

This ecosystem covers sectors ranging from food, veterinary products, human use and cannabis by-products, among others, and represents a strong base for the innovative environment led by institutions dedicated to this type of activities.

FIGURE 3
Innovative ecosystem

According to the registry of the National System of Researchers (SNI), there are almost 1,600 researchers in the Life Sciences segment. These researchers are associated **with over 167** public and private research groups, which has allowed the emergence of startups in recent years. The research groups staffed by highly qualified scientists, most of them trained abroad,

are capable of developing processes and products with quality control systems aligned with international standards.

TABLE 3
Researchers by area
2024

Area	Number of researchers
Agricultural Sciences	**316**
Medical and Health Sciences	**285**
Health Biotechnology	35
Health Sciences	71
Basic Medicine	127
Clinical Medicine	37
Other Medical Sciences	15
Biological Sciences	**343**
Other Natural and Exact Sciences	**397**
Social Science	**445**
Humanities	**224**
Engineering and Technology	**228**
Total	**2,238**
Total Pharma + Life Science	**1,569**

Source: Uruguay XXI based on the National System of Researchers (SNI).

In Uruguay, the pharmaceutical sector has a wide network of research institutions and incubators with state-of-the-art technological platforms, as well as competent human resources. These ecosystem players not only collaborate with the development of projects associated with the industry but also have the capacity to provide specific training for sector personnel. This network of academic research groups and service provider startups form a functional innovation ecosystem for the development of projects and R&D centers with a focus on export and investment attraction.

These organizations include Institut Pasteur, Uruguay Innovation Hub, Laboratorio Tecnológico del Uruguay (LATU), Polo Tecnológico de Pando, Instituto Clemente Estable, Centro de Investigaciones Biomédicas, Centro Uruguayo de Imagenología Molecular (CUDIM) and Instituto de Higiene and Centro Biotecnológico de Investigaciones e Innovación (CBI+I).

Institut Pasteur is a non-profit foundation, created in 2004 by the Institut Pasteur de Paris and Universidad de la República. It has highly qualified human resources and modern equipment available to the entire scientific community and life sciences companies. The institute works on integrated projects at biotechnology related to human and animal health sectors, among others. Within this framework, it provides biotechnology services for foreign and national companies, including Biopolis (Spain), Danone (France), Gema Biotech (Argentina), Virbac (Uruguay) and Microsules (Uruguay).

These institutes, besides contributing to industry projects, provide specific training and also special equipment and infrastructure to complete them, which otherwise would have to be provided by the company, hindering daily operations. Most of these institutions, as well as free zones with specific platforms, technologies and services for Life Sciences companies (e.g. Zonamerica and Parque de las Ciencias) are concentrated in the metropolitan area of Montevideo, creating an innovation hub.

Laboratorio Tecnológico de Uruguay. Organization created in 1965. Its mission is to promote the sustainable development of the country and its international insertion through innovation and the transfer of value solutions in analytical, metrological, technological, management and conformity assessment services in accordance with the applicable regulations.

Latitud is the foundation of the Technological Laboratory of Uruguay (LATU), dedicated to planning and executing research, development and innovation (R&D&I) projects oriented to the productive sector. Its objective is to provide innovative solutions that anticipate global demands, promoting the sustainable development of the country through applied research, technological linkages and networking. Latitud has pilot plants and laboratories that allow the application of traditional and emerging technologies, evaluating processes and products.

Uruguay Innovation Hub[20] is a national program that seeks to propel Uruguay to the forefront of the knowledge economy. Its commitment is to consolidate the local innovation ecosystem. This is achieved through the implementation of new instruments and the development of initiatives that foster collaboration and synergies among the various actors in the ecosystem.

[20] In 2025, the tools of the Uruguay Innovation Hub will be integrated into a broader program led by the Executive Branch: **Uruguay Innova** (U+I).

It seeks to promote and accelerate ventures in high-growth sectors such as advanced technologies, green technologies and biotechnology, as well as to position the country as a benchmark in the search for and resolution of global problems through innovation.[21]

Pando Science and Technology Park (PCTP) is an innovation and development center located in the department of Canelones, Uruguay. It is a unique environment in the country, promoting collaboration between academia, business and government.

PCTP develops its activities mainly in the sectors of biotechnology, nanotechnology, chemistry and pharmaceutical technologies. It offers a wide range of capabilities including laboratories, offices and common rooms, as well as services related to competitive intelligence and surveillance, and support in the formulation and management of R&D&I projects. It also provides assistance in the development of prototypes, technology transfer and intellectual property strategies, ensuring that companies can compete efficiently in a global marketplace.

PCTP not only provides the necessary infrastructure for research and development, but also promotes ecosystem dynamics that favor knowledge sharing and collaboration. Companies located in the PCTP benefit from a collaborative environment and access to a network of contacts that enhances their innovation capabilities.

PCTP is a key player in boosting the pharmaceutical and biotechnology sector in Uruguay, providing the necessary resources for companies to generate economic value through knowledge and innovation.

Polo Tecnológico de Pando Institute of the School of Chemistry (Universidad de la República) serves as a center for research, development and innovation in the following fields: Chemistry, Biotechnology, Material Science and Environment. It specializes in the most productive sectors of industry and services in Uruguay.

Instituto de Investigaciones Biológicas Clemente Estable is a non-profit public institution under the Ministry of Education and Culture (MEC), which brings together several groups dedicated to research in different fields of biological sciences with the following objectives:

[21] See: https://uih.uy/ and **La estrategia de Uruguay Innovation Hub para apalancar a la industria biotecnológica**" - El Observador

- Generate and develop scientific research to obtain new knowledge in the field of life sciences and related areas.
- To train scientific and technical researchers, being a reference in science, technology and innovation at national and regional level.
- Contribute to the scientific and cultural development of the country and to the planning of its scientific policy.

CEINBIO
Centro de investigaciones Biomédicas

Based in the Biochemistry Department of the School of Medicine, the **Centro de Investigaciones Biomédicas** (CEINBIO) functions as an interdisciplinary and multi-institutional academic space where researchers and topics in areas of knowledge in chemistry, biochemistry, cell biology, physiopathology and pharmacology of oxidation-reduction processes converge. In addition, interacts with multiple departments and research units of the Schools of Medicine, Sciences, Chemistry, Institute of Biological Research and the Pasteur Institute of Montevideo.

An important focus of the activities has been the participation in the training of high-quality human resources. Many students completed doctoral studies at PROINBIO, PEDECIBA-Biology, PEDECIBA-Chemistry, as well as foreign interns (students and professors) have researched chemical, biological, pathophysiological and pharmacological aspects of free radicals and antioxidants in the different laboratories of the center.

The center also established contacts with the pharmaceutical and food industry and provided advice in the area of Chemistry and Biology of Free Radicals and Antioxidants. Industry has also shown increasing interest in the development of antioxidant compounds that are being developed and evaluated in their laboratories, as well as in the functional analysis and antioxidant characteristics of proprietary natural products and foods.

cudim
Centro Uruguayo de Imagenología Molecular

Centro Uruguayo de Imagenología Molecular (CUDIM) is committed to the development of research, training and applications in health sciences. In particular, the following activities are promoted:

- Diagnosis: clinical examinations to patients with public and private health coverage, mainly in the areas of oncology and neurology.
- Training: to promote the improvement of teaching, professional and technical skills.
- Clinical and biomedical research: evolution of the impact of cyclotron-PET in various pathologies and in the evaluation of new drugs in research and development.

In addition to research and industry support institutions, there are several examples of incubators operating at the national level, which promote early-stage projects. In general, the profile of these centers is defined by the objectives, mentors and companies supported. Some of those with a profile more closely linked to the pharmaceutical sector are:

Instituto de Higiene. It is a specialized agency under the School of Medicine of Universidad de la República (UdelaR). Its objective is health promotion and disease prevention, as well as teaching at all levels. It also carries out research work focused on health problems and creates knowledge on specific topics. Traditionally, it has been active in the field of communicable diseases. This institute was the first of its kind to be created in Latin America and one of the first in the world.

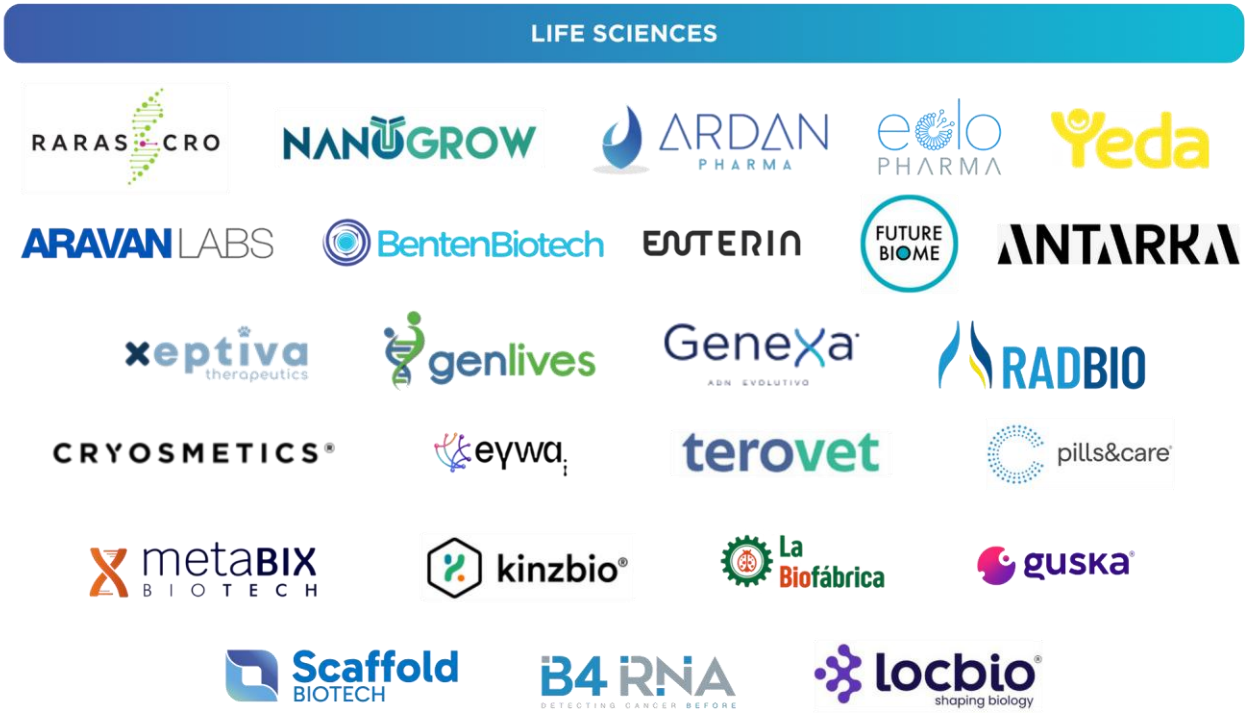
Instituto Nacional de Investigación Agropecuaria. INIA's Biotechnology Unit has laboratories in each of the five experimental stations where it develops various plant tissue culture techniques and biochemical-molecular approaches in conjunction with the National Programs. Each experimental station has modernly equipped laboratories incorporating biotechnological tools in very different areas such as plant, animal and microbial. The techniques applied in different areas range from cell cultures, molecular markers to assist breeding and biochemical-molecular studies associated with characteristics of productive interest.

Khem. This incubator focuses on the development of technology-based companies. It is located on the premises of the Pando Technological Pole and has a lab area of 350 m^2 (3,700 sq-ft) for the incubating projects. It also has the KhemBIO platform, through which biotechnology ventures can be sponsored.

Centro Biotecnológico para la Investigación y la Innovación (CBI+I), together with Universidad Tecnológica del Uruguay (UTEC) and the Centro de Innovación y Emprendimientos (CIE) of Universidad ORT Uruguay, are in charge of the CIE BIO incubator. The incubator promotes and executes actions to develop, strengthen and coordinate the biotechnology-based ecosystem, seeking to turn entrepreneurial initiatives into innovative ventures that add value to society.

This dynamic ecosystem plays a key role in innovation, fostering collaboration between companies and research entities. This context paved the way for the creation of more than 30 biotechnology start-ups focused mainly on human health.

FIGURE 4
Startups



4. HUMAN CAPITAL - TALENT

4.1. EMPLOYMENT

It is estimated that the personnel employed by the different segments of the life sciences and medical devices sector is approximately 7,800 people[22], mostly highly qualified personnel. This figure does not include the indirect jobs generated by the sector, which include marketing and product sales activities, as well as health services.

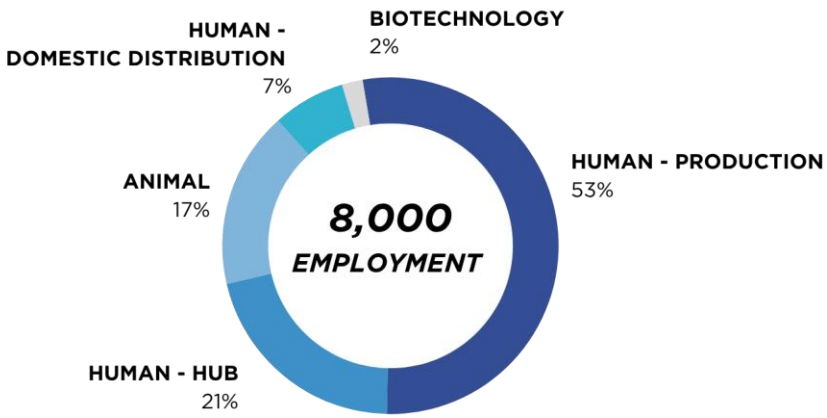
The human health segment employs the most people, with more than 6,500 people, most of whom work in the export sector (some 3,600 in pharmaceutical companies and in medical equipment). For their part, companies focused on trade hub activities and services are also important employment generators. These companies generate around 1,650 direct jobs, including specialized suppliers in the logistics chain

Companies that handle the domestic distribution of foreign pharmaceuticals -often local representatives of international laboratories- employ an estimated 580 people. In addition, companies that dedicate their production exclusively to the domestic market generate approximately 690 jobs. The animal health segment creates some 1,360 direct jobs.

With the addition of more 200 jobs from the biotechnology sector, total employment in the pharmaceutical sector reaches 8,000 people.

[22] Data as of December 2024. Based on data from the Ministry of Labor and Social Security (MTSS) and information provided by the companies.

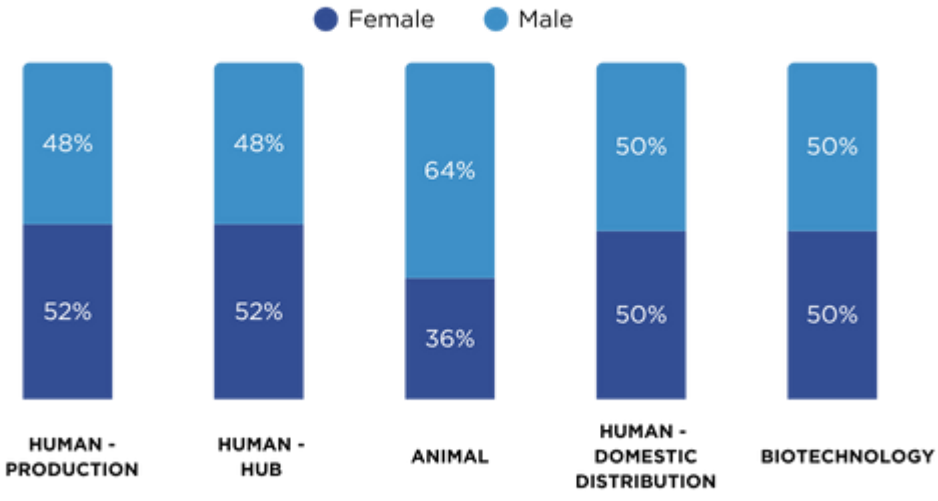
GRAPH 16
Employment in the pharmaceutical sector
By segment (2024)



Source: Uruguay XXI based on data from the MTSS.

The distribution by gender shows a general parity in the pharmaceutical sector, with 51% of men and 49% of women working. The distribution is shown in Graph No. 15, with a higher participation of women in the segment with the highest labor demand, human pharmaceuticals manufacturing.

GRAPH 17
Employment in the pharmaceutical sector
By segment and gender (2024)



Source: Uruguay XXI based on data from the MTSS.

4.2. EDUCATIONAL OFFERING

The development of the sector in Uruguay generated a growing educational market aimed at providing quality training to meet the high demands of the industry.

For the services sector associated with the pharmaceutical and health industry, university courses directly linked to this segment, such as research, manufacturing or health services, are considered.

It should be noted that other university careers, such as those associated with business services and ICT, are also relevant to this segment. These nurture shared services centers based on foreign trade tasks, supply chains, administration and accounting, human resources management or market analysis associated with the pharmaceutical sector.

TABLE 4
University students population
2023

Pharma and Health related education	
Colleges/Educational institutions	**20**
Undergraduate or equivalent	
Enrolled students	62,994
Total annual enrollment	10,634
Total annual graduations	2,252
Postgraduate (Masters, PhDs, others)	
Total annual enrollment	1,222
Total annual graduations	883

Source: compiled by Uruguay ZZI based on data from the Ministry of Education and Culture - "Education Statistical Yearbook 2023"

More than 62,000 students are enrolled in courses directly related to pharmaceutical and health services. There is a clear preponderance of human health and medicine over the rest of the university courses associated with the sector. In addition to the volume of annual graduates, there is a high level of university students in the labor market with many of the skills required for this business segment.

TABLE 5
Student enrollment per subject
2023

Subject	Enrolled
Other - human health	33,464
Medicine	18,124
Veterinary medicine	5,359
Chemistry/ Biochemistry	3,737
Biological Sciences	2,310
Total associated with the sector	**62,994**

Source: compiled by Uruguay XXI with data from the Ministry of Education and Culture - "Education Statistics Yearbook 2023"

The technological development of the sector drives demand for highly qualified labor. In this sense, a wide range of related academic programs and educational institutions make up the sector's education ecosystem:

Universidad de la República (UdelaR). Several schools have research groups linked to the sector, focused on basic and applied research. Among these schools are Chemistry, Science, Veterinary, Engineering, Agronomy and Medicine. These research groups carry out teaching, research, dissemination and linkage activities with the productive sector for the solution of specific problems in industrial production

Universidad Tecnológica del Uruguay (UTEC) has a public university tertiary education proposal with a technological profile, oriented to research and innovation. As for the link with the sector, through several careers in different departments of the country, it has developed laboratories, undergraduate and graduate theses according to the needs of companies, cooperatives, among others.

In the private sector, **Universidad ORT** is the only one that offers Biotechnology degrees (Bachelor's and Engineering) in its School of Engineering. The university has an academic infrastructure that includes laboratories for practice and experimentation in biotechnology.

Universidad Católica del Uruguay's School of Health Sciences offers undergraduate and postgraduate courses focused on health areas (medicine, dentistry, nursing and psychology, among others).

Universidad de la Empresa offers physiotherapy, imaging and nursing degrees at its School of Health Sciences in Montevideo and Colonia.

Universidad de Montevideo, through its Center for Biomedical Sciences, offers several postgraduate courses in medical and pharmacological specialties. It also offers several advanced courses related to the health area.

CLAEH is the first private university with a degree in Medicine in the department of Maldonado.

ANNEXES

4.3. REGULATORY FRAMEWORK

To see the annex with information on the regulatory framework of the sector in Uruguay, please click on the following link: Regulatory Framework.

5. URUGUAY IN FIGURES

Official name	Oriental Republic of Uruguay
Geographical location	South America, located between Argentina and Brazil
Capital	Montevideo
Surface Area	176,215 km2 and 95% of the territory is productive land suitable for agriculture and livestock farming.
Population (2024)	3.44 million
GDP per capita (2024)	US$ 23,526
Currency	Uruguayan Peso ($)
Literacy rate	0.98
Life expectancy at birth	77.9 years of age
Form of government	Democratic republic with presidential system
Political division	19 departments
Time Zone	GMT - 03:00
Official language	Spanish

MAIN ECONOMIC INDICATORS

Indicators	2020	2021	2022	2023	2024	2025*
GDP (Annual Variation %)	-7.36%	5.84%	4.49%	0.74%	3.1%	2.0%
GDP (Million US$)	53,505	60,709	70,672	77,885	80,931	78,693
Population (Million people)	3.44	3.44	3.44	3.44	3.44	3.44
GDP per capita (US$)	15,562	17,643	20,522	22,641	23,526	22,876
Unemployment Rate - Annual Average (% EAP)	10.4%	9.3%	7.9%	8.3%	8.2%	8.6%
Exchange Rate (Pesos per US$, Annual Average)	42.1	43.6	41.1	38.8	40.2	44.5
Exchange Rate (Average Annual Variation)	19.2%	3.6%	-5.6%	-5.6%	3.6%	10.6%
Consumer Prices (Accumulated annual variation %)	9.4%	8.0%	8.3%	5.1%	5.5%	5.5%
Exports of goods and services (US$ millions)**	14,076	19,991	23,560	21,946	23,329	22,806
Imports of goods and services (US$ Millions)**	11,598	15,448	19,639	19,259	19,117	18,688
Trade surplus / Deficit (Millions of US$)	2,477	4,543	3,921	2,687	4,212	4,117
Trade surplus / Deficit (% of GDP)	4.6%	7.5%	5.5%	3.4%	5.2%	5.2%
Overall Fiscal Result (% of GDP)	-5.8%	-4.1%	-3.4%	-3.2%	-3.4%	-
Gross Capital Formation (% of GDP)	16.2%	18.2%	18.7%	17.5%	15.6%	-
Gross Public Sector Debt (% of GDP)	74.6%	69.8%	67.6%	68.6%	67.5%	-
Foreign Direct Investment (Millions of US$) ***	831	2,977	3,386	2,284	-1,735	-
Foreign Direct Investment (% of GDP)	1.6%	4.9%	4.8%	2.9%	-2.1%	-

*Data projected in red.
Sources: BCU, INE, MEF and estimated data(*). Fiscal result data include the effect of Law No. 19.590 (fiftyners). In 2017, the BCU adopted the methodology of the 6th balance of payments manual. The methodology includes purchase and sale of goods and re-exports and are available since 2012. Data are net flows so they may take negative values(**).

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