



PUERTO RICO CONFERENCE 2020 *Empowering Investment*

**Top Entrepreneurial Sectors:
Manufacturing and Pharmaceutical Sector
Elizabeth Plaza**

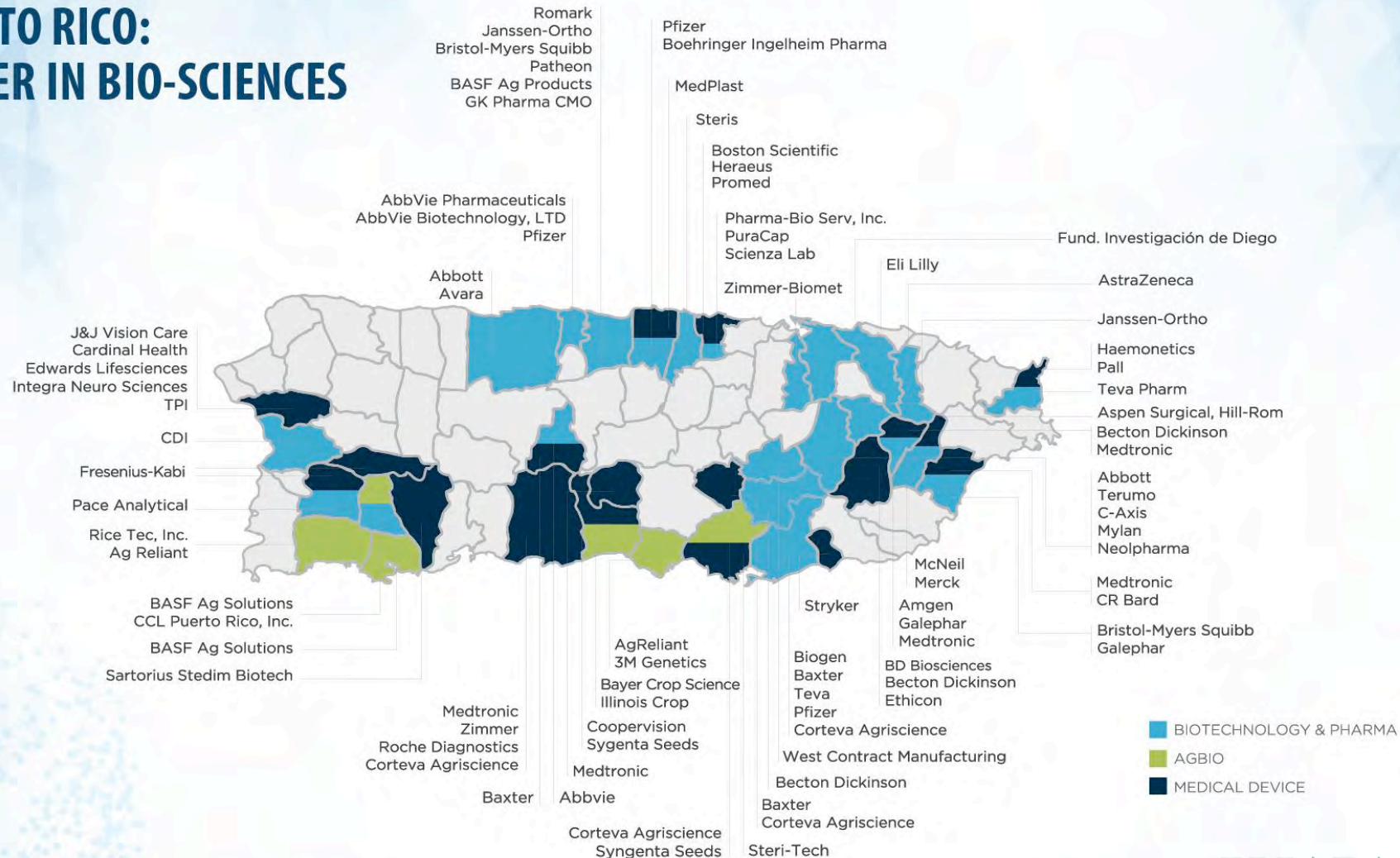




- Over **50 years** of experience in life sciences manufacturing
- **70** medical device plants, **46** biopharma plants
- **12** out of the top **20** pharmaceutical and biotech companies have manufacturing sites in PR
- **6** out of the top **10** medical devices companies have manufacturing sites in PR
- **8** out of the top **15** biopharmaceutical products are manufactured in PR
- **Amgen** has its largest manufacturing facility located in Juncos, PR. More than **90% of its products** are either formulated, finished or packaged at this site.

Puerto Rico Conference 2020: Empowering Investment

PUERTO RICO: LEADER IN BIO-SCIENCES

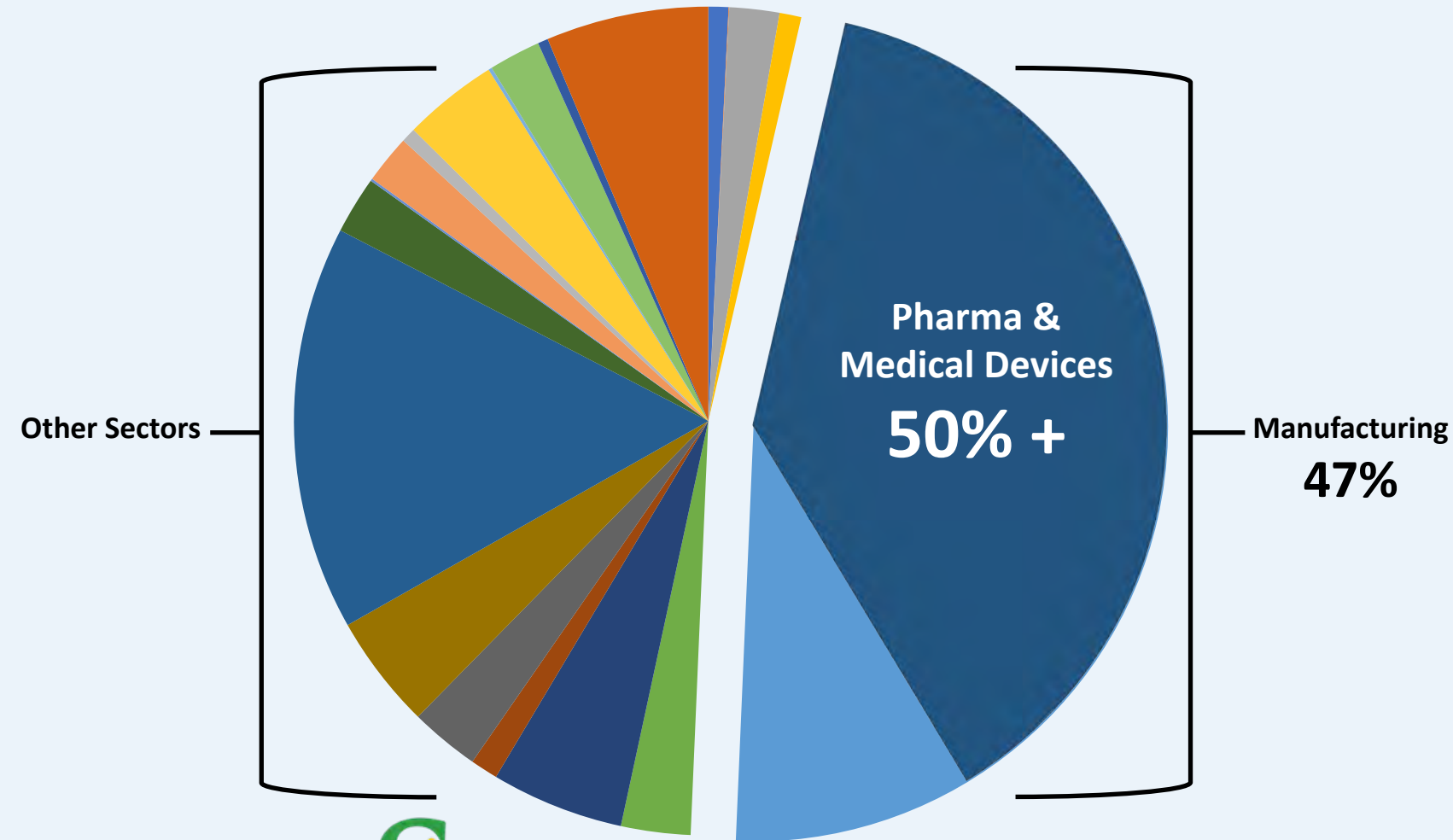


Puerto Rico Conference 2020: Empowering Investment

TOP FACILITIES IN PUERTO RICO

	AMGEN	JANSSEN ORTHO	PFIZER	BMS (MANATÍ)	BMS (HUMACAO)
Year of inception in Puerto Rico	1992	1981	1972	1972	1970
Number of employees	1,800	1,000	2,700	442	225
Top 3 products made in Puerto Rico	Neulasta, Prolia, Enbrel	Prezista, Xarelto, Invokana/Invokamet	Lipitor, Celebrex, Lyrica	Orencia, Opdivo, Yervoy	Eliguis, Sustiva, Glucophage

Puerto Rico Conference 2020: Empowering Investment



Puerto Rico Pharma Contributions



34%
of GDP



USD 6.7B+
to Government of Puerto Rico (taxes, 154, royalties, patente)



USD 1.1B+
in Annual Wages



USD 150M+
by Employees



50% (including Med Dev)
of Puerto Rico's Total Manufacturing

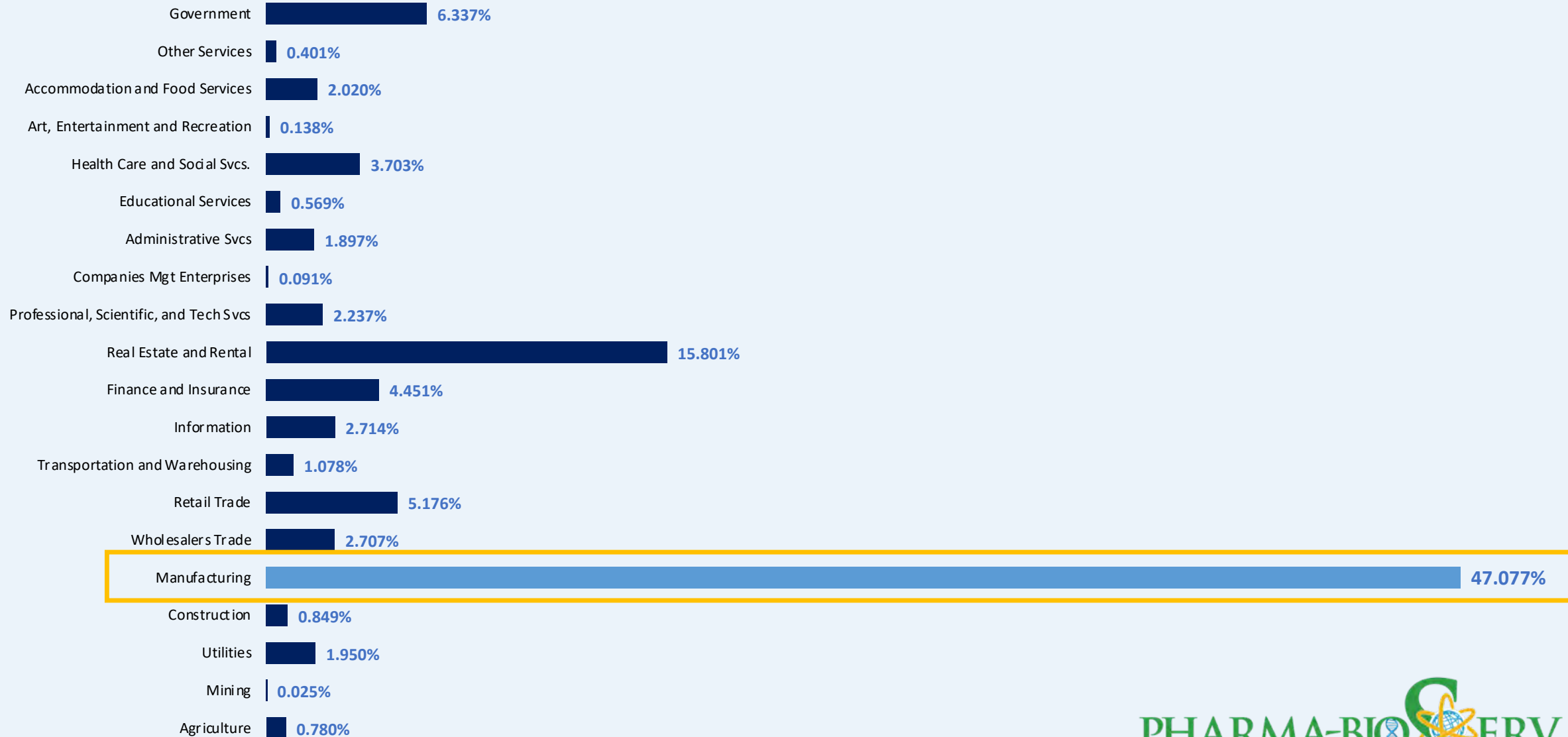


150,000+ (biopharma & Med Devices)
Top 7 USA employment concentration and specialized human capital



60%+
of Pharmaceutical workers earn more than the average manufacturing employee in Puerto Rico*
Avg annual salary : **\$62,000**

Puerto Rico Conference 2020: Empowering Investment



A Global Look

Puerto Rico is the fifth largest area in the world for pharmaceutical manufacturing

Comprises **68%** of total exports from PR over **85** countries around the world



Puerto Rico Conference 2020: Empowering Investment

Country	Tax Rate
<i>UNITED STATES</i>	21%
<i>IRELAND</i>	13%
<i>GERMANY</i>	30%
<i>MEXICO</i>	30%
<i>SINGAPORE</i>	17%
<i>PUERTO RICO</i>	4%



SECURING THE FUTURE FOR PUERTO RICO: RESTORING THE ISLAND'S
ROBUST MEDICAL PRODUCT MANUFACTURING SECTOR

- More pharmaceutical products for the U.S. (**\$40B**) than any foreign country
- Next largest producer is Ireland with nearly **\$20B** in imports
- More pharmaceuticals than any state (by dollar value), the next largest being **Indiana** and **California**. Puerto Rico produces more pharmaceuticals than both of these states combined
- **8%** of pharmaceutical expenditures by Americans are manufactured in Puerto Rico
- There are more than **1,000** individual drug products registered in the NDC, to be manufactured in Puerto Rico
- **Several hundred** of these drugs are considered by FDA to be **medically important**
- **30** drug products and approx. **10** biological devices/biologics are of **critical importance** because Puerto Rico is a primary or sole manufacturing site and these drugs do not have clear therapeutic alternatives
- All **40** of these products are being carefully monitored by the FDA Drug Shortage Teams

Puerto Rico Conference 2020: Empowering Investment

TOP SIX EXPORTING US STATES & TERRITORIES FOR PHARMACEUTICAL & MEDICINE MANUFACTURING

(2018, USD billions)



Source: US Census Bureau, Foreign Trade Statistics

www.pharmaboardroom.com

PHARMA-BIO  SERV



Romark: The New Manufacturing Wave's Poster Child



MARC AYERS
—
CEO, Romark

Headquartered in Tampa, Florida, Romark focuses on developing innovative treatments for infectious diseases and the latest newcomer to Puerto Rico. CEO Marc Ayers recounts how he came to the decision to establish the company's first manufacturing plant of finished products on the US territory.

"We were at a point in the development of our company where we needed to be able to control the pharmaceutical manufacturing process," he states. "We were looking for opportunities to be able to manufacture large quantities of products, and ideally to be able to do it ourselves. A friend explained the incredible economic development package being offered by PRIDCO to a Spanish company that was considering establishing operations on the island.

"However, what ultimately made the difference was the caliber of the talent and the quality of the infrastructure available here in pharmaceutical manufacturing," continues Ayers. "Florida cannot yet compare to Boston, New Jersey, and the San Francisco Bay Area in pharmaceutical manufacturing and, as a result, it is difficult to find and attract talent. When we came to Puerto Rico, we were able to meet industry leaders and veterans interested in building something special together."

"Establishing our manufacturing facility here helps us ensure business continuity, mitigate risks, and reduce costs. In addition to our manufacturing facility, we also acquired an analytical laboratory in Dorado. Together with our API facility in Belgium, we have the ability as a vertically integrated pharmaceutical company to develop new products and bring them to market," he proclaims. For the project, four local firms, each one an expert in its area,



JORGE TIRADO
—
managing partner, CMA

teamed up to provide a turnkey solution: Design (CMA), Engineering and Mechanical (BLDM), General Contractor (CIC Construction Group) and Project Management, Commissioning and Validation (Pharma-Bio Serv). Together, they designed, built and validated the new facility with Quality by Design as the end goal. "As the project moved along, the required documentation was developed to meet the FDA's requirements. By integrating the validation process since day one, we were able to reduce time-to-market by about a year," emphasizes Francisco Díaz-Massó of BLDM. "This project was centered around listening to the needs of the client. Based on that, we were able to develop the best strategy to reach the objectives in a timely manner," adds Jorge Tirado, managing partner of CMA. "This is an unparalleled innovative approach to Technology Transfer, applying local knowledge with an integrated team of specialized firms to increase efficiencies and Quality," stresses Elizabeth Plaza, founder & chairwoman of Pharma-Bio Serv.

Ayers invites other companies to follow Romark's lead and establish manufacturing facilities on Puerto Rico. "Puerto Rico is an island of opportunity for companies seeking to mature to the product commercialization stage because talent is readily available," he states. "People are highly educated, have unmatched experience in the industry and there is a quality-driven culture." Elizabeth Plaza agrees: "Big pharma companies are consolidating and finding themselves with excess capacity. Although they still play a very important role in the Puerto Rican manufacturing landscape, we see great opportunities for small and medium-sized companies to come here and take advantage of the experience that multinationals have built."



ELIZABETH PLAZA
—
founder & chairwoman, Pharma-Bio Serv



FRANCISCO DIAZ-MASSO
—
president, BLDM

Global Pharma industry spends approximately \$180 billion on R&D annually

By Elizabeth Doughman | March 27, 2019

Pharmaceutical research and development expenditure in the U.S. from 1980 to 2017 (in billion U.S. dollars)



Source:
PhRMA
© Statista 2018

Additional Information:
United States; PhRMA members

statista

- Personalized & Regenerative Medicine
- Nutraceuticals / Nutritional Supplements
- Digital Medicine/Therapeutics
 - ✓ Machine Learning
 - ✓ Artificial Intelligence
 - ✓ Platform Technology
 - ✓ Genomics
- Precision and Predictive Medicine
- Cloud Based Analytics
- Medicinal Robotics / Diagnostics
- 3D Printing
- Pharmaceutical Technologies
 - Artificial Intelligence for Drug Development
 - Drug Delivery Methods
 - Drug Discovery Platforms
 - Pharmaceutical Bioinformatics
 - Therapeutic Molecules
 - Continuous Manufacturing

Puerto Rico Conference 2020: Empowering Investment

GSK in Carlisle to close by 2021, operations being moved to Puerto Rico

By DENISE BONURA / Managing Editor Feb 13, 2020 0



The GlaxoSmithKline facility in Carlisle will phase out operations to its plant in Puerto Rico by the end of 2021, which will affect about 260 employees.

PHOTO COURTESY OF LOOPNET.COM

Global healthcare company GlaxoSmithKline plans to close its facility on Allen Road in Carlisle by 2021, and move the plant's operations to Puerto Rico.

Easing air cargo rules represents growth for Puerto Rico

A waiver to allow airlines to perform certain cargo and transfer services at international airports on the island deserves the strong and unified support of all government and private sectors in Puerto Rico and in the United States, including the aviation industry business and labor components.

endi
EDITORIAL

A "giant step" for Puerto Rico as a transshipment hub

According to an expert, the federal government's decision would allow the island to "monetize" its geographic position



THANK YOU!

Follow us:



www.camarapr.org

#CamaraEnAccion