



2021

Introduction to Biotechnology and Pharmaceutical Industries in Taiwan (R.O.C.)



臺灣

TAIWAN

TAIWAN - Your Best Partner in Asia

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Preface

The development of Taiwan's biomedical industry is closely connected with national security, economic growth, health and welfare, and environmental sustainability. Although border quarantines at airports and harbors are important, drug and vaccine developments are also very critical to solving unpredictable global pandemic diseases like COVID-19 crisis in 2020. Taiwan has supported its biomedical industry since the 1980s with many policy programs in promoting and creating a very favorable environment for its development.



Among these policies and incentives, the government promulgated “The Act for the Development of Biotech and New Pharmaceutical Industry” in 2007. This Act gives qualified biomedical companies tax reduction benefits based on their spending in research and development (R&D) and talent training. Tax reduction benefits are also provided to investors based on their investments in qualified companies. All of these are to encourage more development of innovative products and technology platforms in drugs and medical devices. By September 2020, 151 companies and 374 products have been qualified for supports by this Act and closed to 50 products have been approved in the market globally. Furthermore, there have been more than 10 global licensing activities to big pharma between 2019 to 2020. As such, Taiwan's biomedical industry generates increased revenue while at the same time building a reputation worldwide. Although this Act will expire in 2021, the government is working on a new Act to provide continued support for Taiwan's biomedical industry. The new Act will meet both current and future development trends and global market needs to make the biomedical industry as one of the main engines of economic growth in Taiwan.

In 2019, private investments in Taiwan's biomedical industry reached NT\$55.1 billion (approximately US\$1.78 billion), and growth of 8.7% compared with 2018. By June 2020, there are 124 biomedical companies listed in the stock market or in the OTC (over the counter) market, 58 in the emerging stock market, and 21 in GISA (the Go Incubation Board for Startup Acceleration Firms). It shows there are many ways to raise funds in the capital market to support innovative BD (business development) and R&D activities or clinical researches. Taiwan's active capital market supported a number of new drug or niche product companies directly and created a revenue of NT\$559.7 billion (approximately US\$18.10 billion) in 2019.

With the global COVID-19 crisis, the development of each country's biomedical industry is becoming extremely important. Our biomedical industry shall spare no effort to utilize our innovative R&D strengths and manufacturing capabilities to develop vaccines, drugs or medical devices against COVID-19, and shall endeavor to become a key contributor in the global biomedical supply chain. Along with Taiwan's world renowned healthcare systems supporting very high quality clinical researches, Taiwan will continue to make itself the Asia-Pacific biomedical R&D hub to attract more investments and collaborations.



Director General
Industrial Development Bureau, MOEA
October, 2020

Bravo! TAIWAN



General Environment

Taiwan is at the southernmost tip of Northeast Asia. It is in the center of the East Asian island arc and on the western edge of the Pacific Ocean, Japan and the Ryukyu Islands are to the north, and the Philippines is to the south. Taiwan is not only a crucial Asia-Pacific trade and logistics hub but also a major strategic base. Across its 36,000 km² are diverse natural elements and rich cultures.

Capital: Taipei

Land Area: 36,000 km²

Population: 23.57 million

Primary Ethnic Groups: Han Chinese, Aboriginal Groups, and New Immigrants

Languages: Mandarin, Taiwanese, Hokkien, Hakka, and Indigenous Languages

Religions/Belief Systems: Buddhism, Taoism, Folk Beliefs, Christianity, and Islam



Pleasant Climate

Taiwan is warm throughout the year, with greater temperature variations in spring and winter than in summer or fall. The average annual temperature is 22 °C, with lows typically hovering at approximately 12 to 17 °C. The south is generally warmer than the north, with average January temperatures of approximately 16 °C in Taipei and 20 °C in Kaohsiung.

Stable Political System

Taiwan is currently a member of several international economic organizations, including the World Trade Organization, the Asia-Pacific Economic Cooperation group, and the Asian Development Bank, and engages in regular trade and exchanges with over 140 countries worldwide. As the global economy becomes more liberal and develops more rapidly, Taiwan is continually adjusting its industrial strategies, easing regulations, removing investment restrictions, and reinforcing intellectual property measures to be in line with international trends.

Major Economic Indicators, Taiwan 2019



GDP

US\$645.836 billion

Economic Growth

1.56%

Foreign Exchange Reserves

US\$498.17 billion (end of Aug. 2020)



Export Value

US\$329.19 billion

Import Value

US\$285.69 billion



Unemployment

4.00% (end of Jul. 2020)

Labor Participation Rate

59.20 (end of Jul. 2020)

*Sources: National Statistics, R.O.C. (Taiwan)

Asia-Pacific Hub

Taiwan serves as an Asia-Pacific transportation hub connecting Northeast and Southeast Asia. Its first-rate international airports enable convenient travel averaging only 2.55 hours from Taipei to five major western Pacific cities (Tokyo, Seoul, Shanghai, Hong Kong, and Manila), and world-class Kaohsiung Port facilitates goods shipment averaging only 53 hours to five major regional ports (Manila, Singapore, Hong Kong, Shanghai, and Tokyo). Taiwan not only forms a crucial link for Europe, America, and Japan with emerging Asia-Pacific markets but also is a preferred location for multinationals establishing their regional headquarters.



Why Taiwan

5+2 Innovative Industries Plan



Biomedicine on the rise



Goals for 2025

- 20 new drugs, 80 high-value devices to global markets
- Revenues of NT\$1 trillion





Taiwan's longstanding commitment to promoting global trade and open markets is well established. The government has come very far to create an infrastructure and regulatory framework conducive to the biomedical industry. Taiwan's favorable location, open financial markets, sound financial institutions, low taxes, reliable legal system, abundant foreign reserves, and the country's talented people make Taiwan the perfect place for business.

Comprehensive Bio-industrial Clusters



*Sources:

The Ministry of Science and Technology; Industrial Development Bureau, Ministry of Economic Affairs; The Council of Agriculture, Executive Yuan; Taipei City Government

Taiwan's Competitive Advantages



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WORLD
ECONOMIC
FORUM

In the Global Competitiveness Report 2019 issued by the World Economic Forum (WEF), Taiwan ranks 12th among 141 economies and 4th in the Asia-Pacific. The report listed Taiwan “super innovator”, alongside Germany, U.S., and Switzerland, with more than 80 items in innovation capability.



In the World Competitiveness Ranking 2020 report by the International Institute for Management Development (IMD), Taiwan's competitiveness ranks 11th out of 63 countries and 3rd in the Asia-Pacific.



THE WORLD BANK

In the World Bank's "Doing Business 2020" report, Taiwan finished 15th out of 190 economies for ease of doing business.



In the latest U.S. Business Environment Risk Intelligence (BERI) 2020 report, Taiwan is listed fourth best destination for investment.

Successful cases



AstraZeneca

In September 2018, AstraZeneca announced an investment plan of NT\$1 billion in Taiwan, including developing new drug for ovarian cancer, lung cancer, etc. along with talent training programs.



SHL GROUP

In January 2019, SHL Group announced expansion plan of NT\$1 billion in Taiwan, including 800 new jobs in Taiwan to support ramped up productions for SHL Medical. With this expansion, SHL Group will have more than 4,500 employees in Taiwan and over 5,000 employees globally.

Investment Advantages

Asia-Pacific Medical Hub

Taiwan serves as Asia-Pacific transportation hub connecting Northeast and Southeast Asia.

Reliable Legal Environment

Taiwan has a mature and well-established legal system. Additionally, regulations for commercialization are timely adjusted in line with changing international norms, and foreign investors enjoy substantial protection under the Statute for Investment by Foreign Nationals.

PIC/S GMP From 2013

Drug review regulations conforming to international standards and pharmaceutical processes in accordance with internationally accepted PIC/S GMP specifications.

Comprehensive Bio-industrial Clusters

Taiwan has built up biotech and medical industry clusters based on local characteristics and geographical environment.

14 Disease-specific clinical trial consortiums

Taiwan Clinical Trial Consortium (TCTC) works to promote Taiwan as an Asia-Pacific regional leader in new drug and clinical trials and facilitates development and commercialization of international and domestic biomedical products.



Sound Infrastructure

Taiwan has a dense, comprehensive transportation network and relatively inexpensive water, electricity, and telecommunications utilities that approaching 100% penetration.



Diverse Culture of Innovation

Taiwan boasts a thriving R&D sector. Innovative elements bring worldwide popularity to its high-tech consumer electronic products, chain store services, bicycles, pearl milk tea and Chinese-language music.



Well-protected Intellectual Properties

Regarding protection for intellectual properties, Taiwan adheres to international treaties and norms. The relevant policies and laws are open and transparent in Taiwan.



Friendly towards Fundraising and Financing

Taiwan adheres to international treaties and norms for the protection of intellectual properties. All relevant policies and laws are open and transparent in Taiwan.



Excellent Labor Force

Taiwan's excellent labor force is retained by its universal education system, which produces more than 300,000 new graduates each year at the college level or above.



Overview of Taiwan's Biomedical Industry



Photo by National Biotechnology Research Park

Biomedicine is listed as a priority sector under the “5+2” Innovative Industries Plan. On November 10, 2016, the government approved the Biomedical Industry Innovation Program to bring even greater health and wellness to the people of Taiwan, and establish Taiwan as the capital of biomedical research and development in the Asia-Pacific region. Efforts are being directed into four action plans to create links locally, globally and to the future in order to achieve the goals of developing 20 new medicines, bringing 80 high-value medical devices to market, and building biomedicine in Taiwan into a Trillion-NT-dollar industry by 2025.

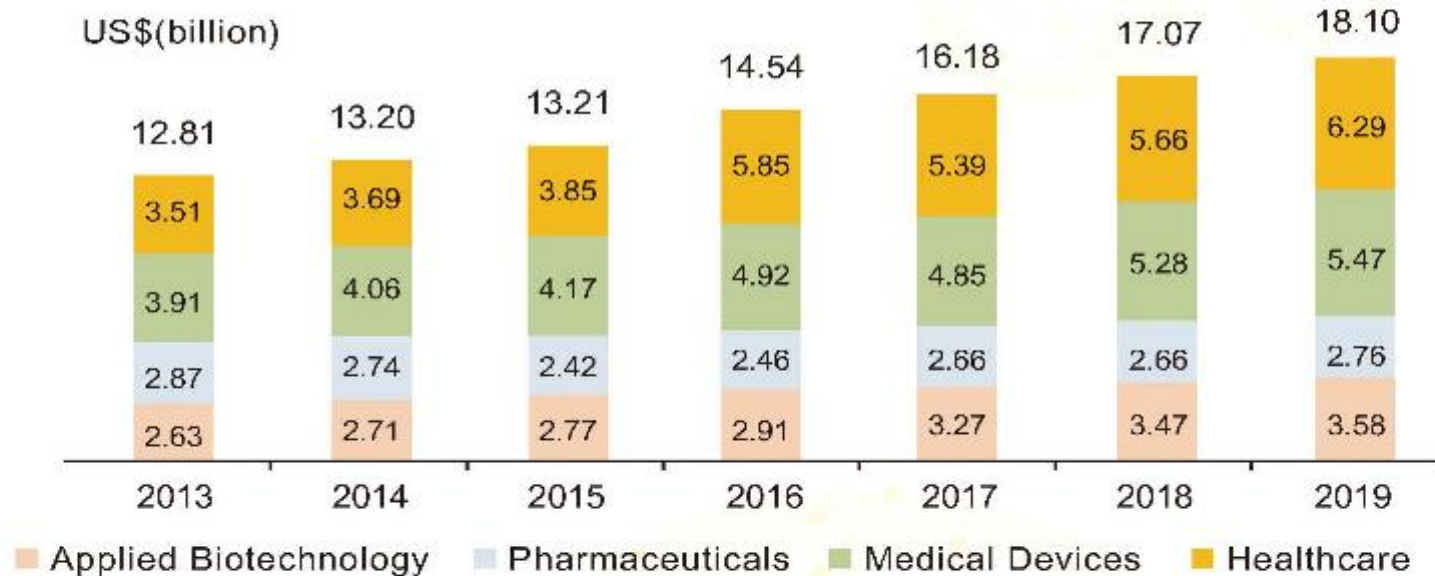


Taiwan’s biomedical industry comprises four major sectors: applied biotechnology, pharmaceuticals, medical devices, and healthcare services.



In 2019, revenue in Taiwan's biomedical industries amounted to US\$18.10 billion, representing a growth of approximately 8.72% over that in 2018 (US\$17.07 billion).

While healthcare represents the largest subsector in Taiwan's biomedical industries, with revenue US\$6.29 billion in 2019, or 34.75% of the total revenue in these industries, medical devices represent the subsector in Taiwan's biomedical industries, with revenue of US\$5.47 billion in 2019, or 30.22% of the total revenue in these industries.



* Source: Biotechnology Industry in Taiwan 2020. IDB. MOEA



The public offering market represents a platform for the government, companies, and investors to raise funds and invest directly. Taiwan's negotiable securities market is divided into over-the-counter and exchange markets according to review conditions. Companies intending to engage in innovative and creative undertakings can raise funds through the emerging stock market or the Go Incubation Board for Startup and Acceleration Firms (GISA) stock market by underwriting firms familiar with relevant operations and regulations.

As of 2019, Taiwan had 124 listed biotech and medical care companies, with a combined value of US\$23.90 billion. In addition, 58 and 21 companies have registered on the emerging and GISA stock markets respectively. Through diverse capital market fundraising channels for operating and R&D funds, the value of Taiwan's public capital market continues to increase.

One-stop Service Window for Biomedical Industry



IDB 經濟部生技醫藥產業發展推動小組
Biotechnology and Pharmaceutical Industries Promotion Office, MOEA

Whatever you are seeking in the biomedical industry, the BPIPO's One-Stop Service Window is here to help.

The Biotechnology and Pharmaceutical Industries Promotion Office (BPIPO) is the one-stop service window for Taiwan's biomedical industry. It is one-stop service window designed to assist companies in the biomedical industries worldwide. The assistances provided by BPIPO include: financial support, investment promotion, stock listing, personnel training and recruitment, R&D collaboration, technology transfer, commercialization, marketing, promotion activities, strategic alliances, and others.

Over the past few years, BPIPO has helped Taiwan's biomedical industry obtain investments of more than US\$1,500 million per year. BPIPO has also helped set up more than three innovative companies per year. The One-stop Service Window has helped more than 100 companies per year.



Responding to private sector's consultation needs, the One-stop Service Window for the biomedical industry provides a convenient, comprehensive, and interactive platform connecting professional resources and service capacities of various ministries through webpages, email, and social media. This platform employs project management methods and provides 24-hour support. By compiling information and providing customized follow-up, the BPIPO assists the biomedical industry in overcoming investment and operational obstacles. Multilingual website interfaces are gradually being added to expand services to international vendors to obtain information on the status of Taiwan's biotechnology industry and related investment incentives, and to engage in investment and business cooperation.

Service and Support

-  CMO / CRO
-  Licensing / Co-development
-  Technology Transfer
-  Marketing and Distribution
-  Investment and Financing
-  Joint Venture / Subsidiary / Lab
-  R&D Incentives and Policy Information







One-stop Service Window for Biomedical Industry Biotechnology and Pharmaceutical Industries Promotion (BPIPO)

 <https://www.biopharm.org.tw>

 Email: services@biopharm.org.tw

 TEL: (886-2) 2655-8135

 FAX: (886-2) 2655-8134

Contacts Worldwide for Taiwan's Biomedical Industry



❖ **Industrial Development Bureau, MOEA**

Formulating industrial development policies, strategies, and measures; promoting programs related to industrial upgrading, development and management of industrial zones; formulating fiscal and financial measures for industrial development, industrial pollution control, industrial safety counseling and factory management, general industrial administration.

☎ (886-2) 2754-1255

📍 <https://www.moeaidb.gov.tw>

✉ service@moeaidb.gov.tw



❖ **Biotechnology & Pharmaceutical Industries Promotion Office, MOEA**

Acting as the single contact window for domestic and international biomedical-related industries; acting as One-stop Service Window, promoting industrial investment and integration; assisting biotech, pharmaceutical, medical device industry development and upgrade.

☎ (886-2) 2655-8135

📍 <https://www.biopharm.org.tw>

✉ services@biopharm.org.tw



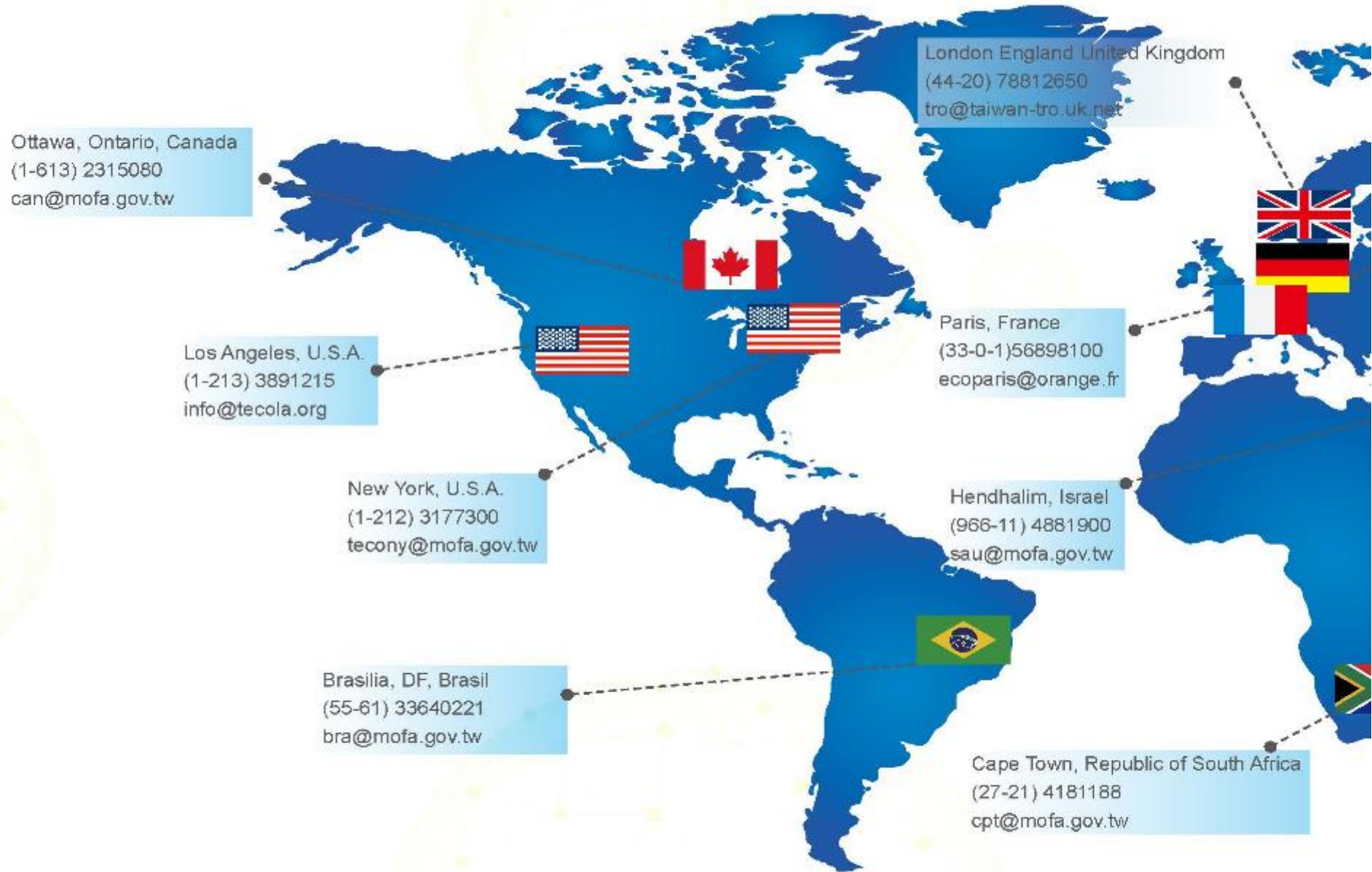
❖ **InvesTaiwan Service Center, MOEA**

The InvesTaiwan Service Center (ITSC) offers a single window for investment services, and uses a "project-oriented, dedicated case manager with specific responsibilities, and customized start-to-finish service" approach to assist investing firms.

☎ (886-2) 2311-2031

📍 <https://investtaiwan.nat.gov.tw/showIndInfo?guid=2&lang=eng>









Bravo!

Biotechnology Taiwan

Photo by Sun Moon Lake National Scenic Area Administration, Tourism Bureau, MOTC

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