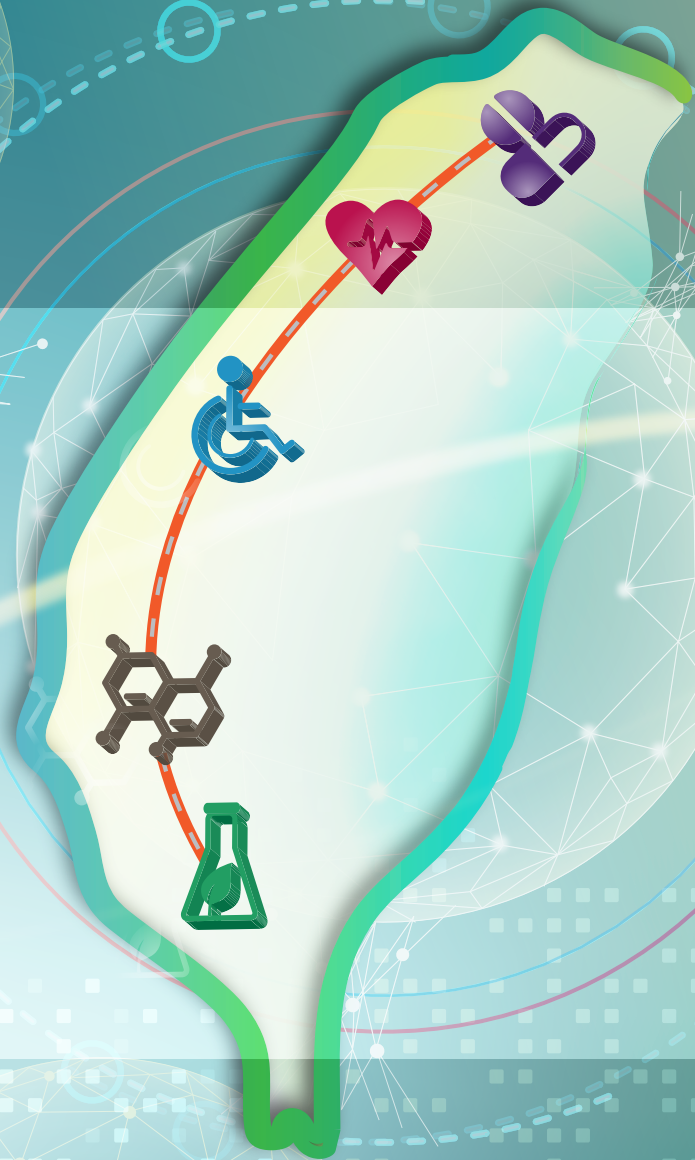




2021

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



臺灣

TAIWAN

TAIWAN- Your Best Partner in Asia

Contents



02 | Preface

04 | Bravo! Taiwan

08 | Why Taiwan

12 | Taiwan's Competitive Advantages

16 | Overview of Taiwan's Biomedical Industry

20 | One-Stop Service Window for
Biomedical Industry

24 | Contacts Worldwide for
Taiwan's Biomedical Industry

Preface

The biotechnology industry is inseparable from national security, economic development, health, welfare, and environmental sustainability. In the face of rapid spreading of the global infectious disease, in addition to boarder entry restrictions, medicine and vaccine development play a critical role in overcoming the pandemic. The Taiwanese government has promoted the biotechnology pharmaceutical industry since the 1980s and approved a series of policies for promoting the development of the industry, establishing a favorable environment for developing the Taiwanese biotechnology pharmaceutical industry.



The Biotech and New Pharmaceutical Development Act, which was published in 2007, provides tax incentives to biotechnology pharmaceutical companies for technology, funds, and human resources to encourage them to invest in biotechnical pharmaceutical development. By June 2020, 151 companies have been approved as new pharmaceutical companies; 364 new pharmaceutical projects have been developed; and tens of pharmaceutical products have been authorized for market sales worldwide. Additionally, many products have been authorized to international manufacturers, promoting the revenues and global exposure of the Taiwanese biotechnology industry considerably. Because the Biotech and New Pharmaceutical Development Act expires in 2021, the Ministry of Economic Affairs is developing a new bill to create new incentives for the growth of Taiwan's biotechnology industry in coordination with the demands on industrial development and market applications.

In 2019, the volume of the Taiwanese biotechnology pharmaceutical business was NT\$ 559.7 billion (approximately US\$ 18.09 billion), which constituted a growth rate of 8.7%; the sum of the private investments in the Taiwanese biotechnology pharmaceutical industry was NT\$ 55.1 billion (approximately US\$ 1.78 billion). By June 2016, 124 Taiwanese biotechnology pharmaceutical companies have been listed as public entities, 58 have been listed in the emerging stocks market, and 21 have been listed in the Go Incubation Board for Startup Acceleration Firms. Particularly, the number of research and development pharmaceutical companies that have applied their new drugs in clinical tests or those with feature products have increased substantially, and diverse financing channels in the capital market have been employed to raise the funds required for research, development, and business operations.

Development of the biotechnology industry has been highly anticipated in the face of the challenges in the post-COVID-19 global economic development. Taiwan should utilize its research, development, and manufacturing capacity in the biotechnology industry to expand the promotion of the industry and international mutual assistance and cooperation beyond the epidemic prevention. Moreover, Taiwan should grasp the opportunities to promote its biotechnology development, clinical test system, and niche products to the world, becoming a part of the global supply chain. This also attracts foreign companies to invest in Taiwan or build business partnerships with Taiwanese companies, cementing Taiwan's status as the center of the Asia-Pacific biomedical research and development industry.

Director General
Industrial Development Bureau, MOEA
October, 2020

Bravo! TAIWAN



General Environment

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

Capital: Taipei

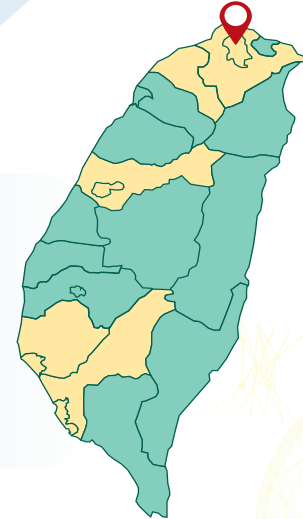
Land Area: 36,000 km²

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 remains 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 – 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 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

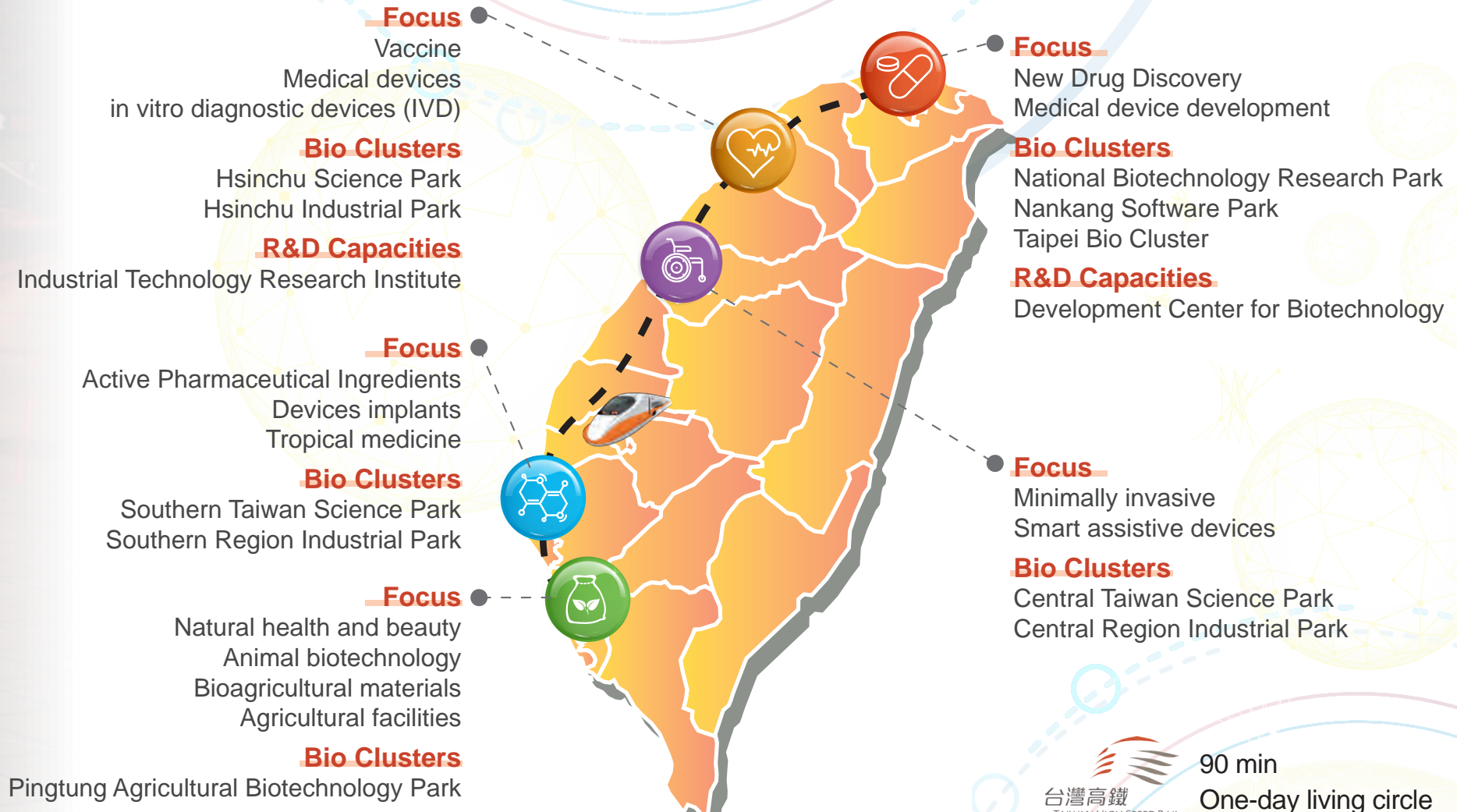
- 20 new drugs, 80 high-value devices to global markets
- Revenues of NT\$1 trillion





Taiwan's longstanding commitment to promoting global trade and open markets is well established. The government has come this far to create an infrastructure and regulatory framework conducive to the biomedical industry. A favorable location, open financial markets, sound financial institutions, low taxes, a 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



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 as a “super innovator” as one of four economies, alongside Germany, U.S. and Switzerland, to receive more than 80 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 3th 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.



BUSINESS
ENVIRONMENT
RISK
INTELLIGENCE

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

Successful cases



AstraZeneca

In Sep. 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 Jan. 2019, SHL Group announced plan of NT\$1 billion in Taiwan, including to create 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 an 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), working to promote Taiwan as an Asia-Pacific regional leader in new drug and clinical trials and facilitate 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 approach 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

Abundant capital, stable exchange rates, and relatively low interest rates and capital costs make Taiwan a friendly environment for fundraising and financing.



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.

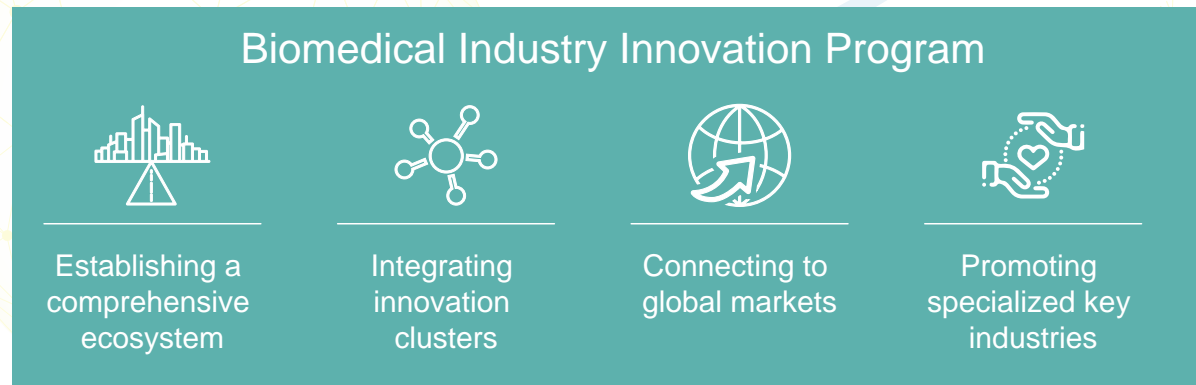


Overview of Taiwan's Biomedical Industry

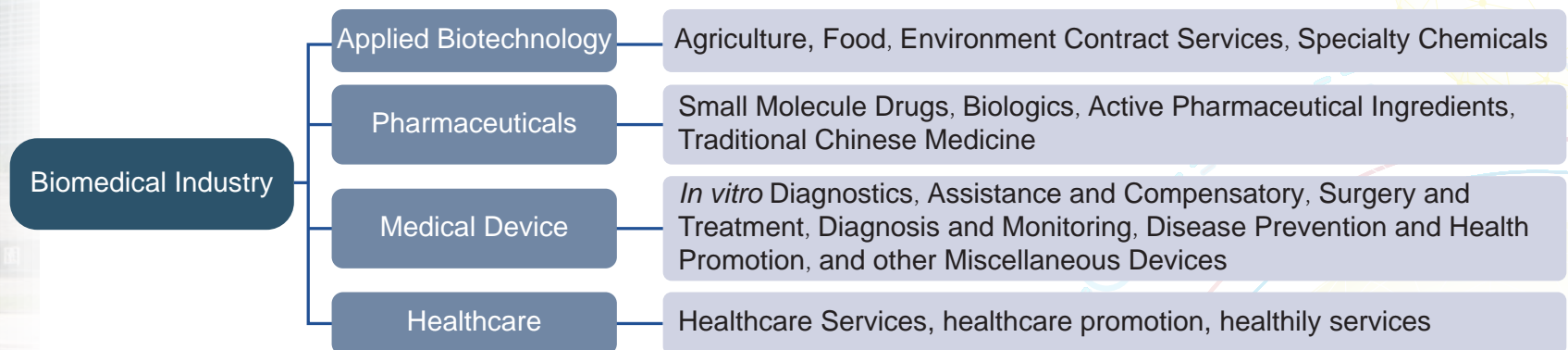


Photo by National Biotechnology Research Park

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 the nation as a 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 NT-trillion-dollar industry by 2025.

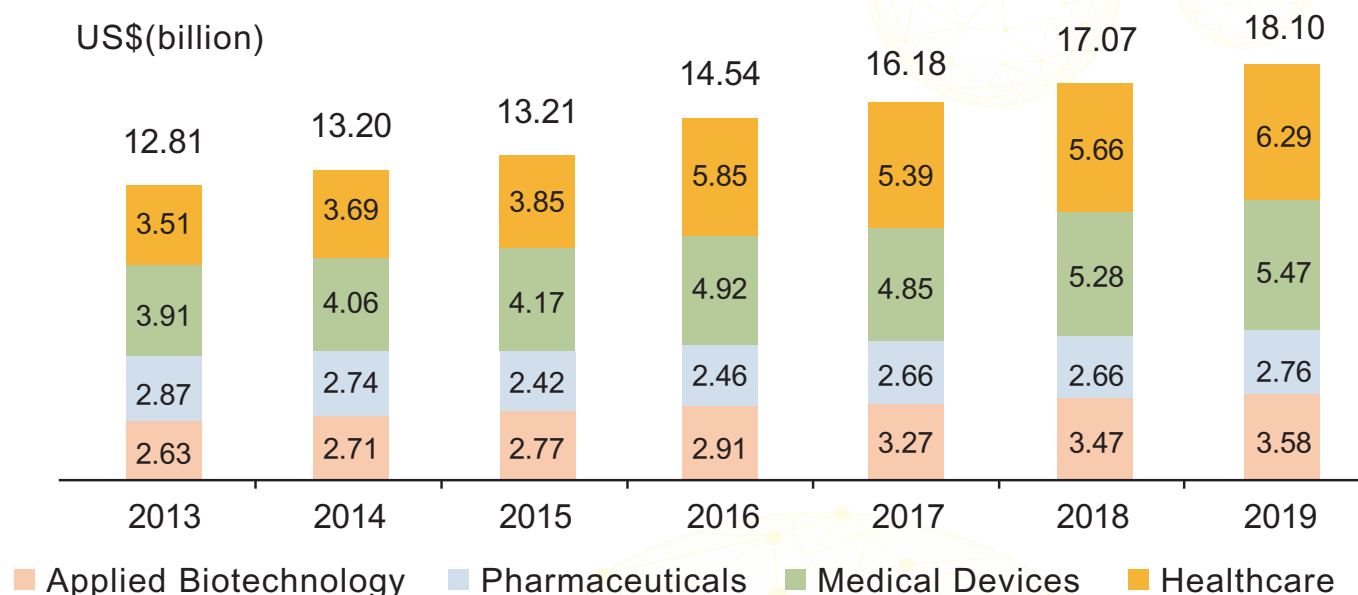


Taiwan's biomedical industry comprises four major sectors: applied biotechnology, pharmaceuticals, medical devices, and healthcare services.

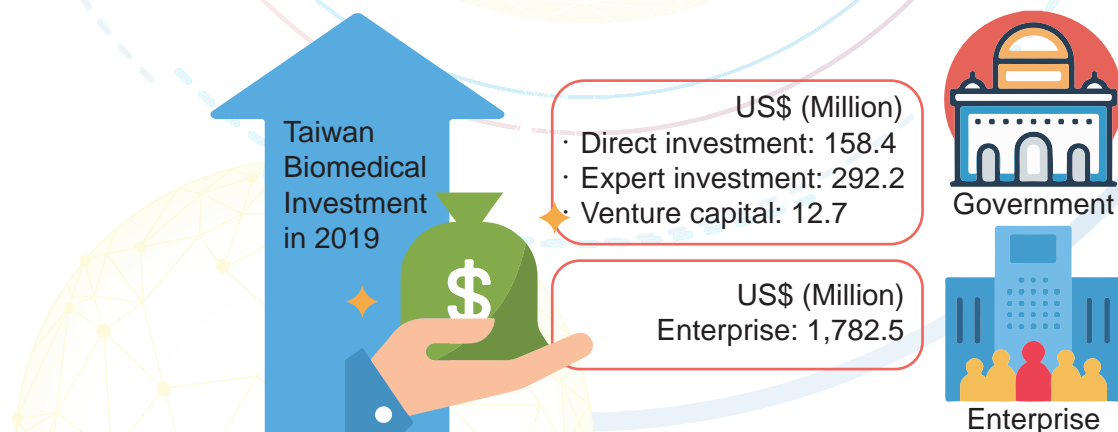


In 2019, revenue in Taiwan's biomedical industries amounted to US\$18.10 billion, representing a growth of approximately 8.72% over that in 2018 (US\$17.07 billion).

Healthcare represent the largest subsector in Taiwan's biomedical industries, with the revenue of US\$ 6.29 billion in 2019, or 34.75% of the total revenue in these industries. And medical devices represent subsector Taiwan's biomedical industries, with the 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 interested in becoming listed or nonpublic microenterprises 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 the 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

24小時回覆窗口
(生醫產業單一窗口)



24hrs Reply Center
(One-Stop Service Window for Biomedical Industry)



綜合窗口
(生物技術醫藥產業)



聯絡我們
Contact us
お問い合わせ



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 single contact window for Taiwan's biomedical industry. It is an 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 to 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.

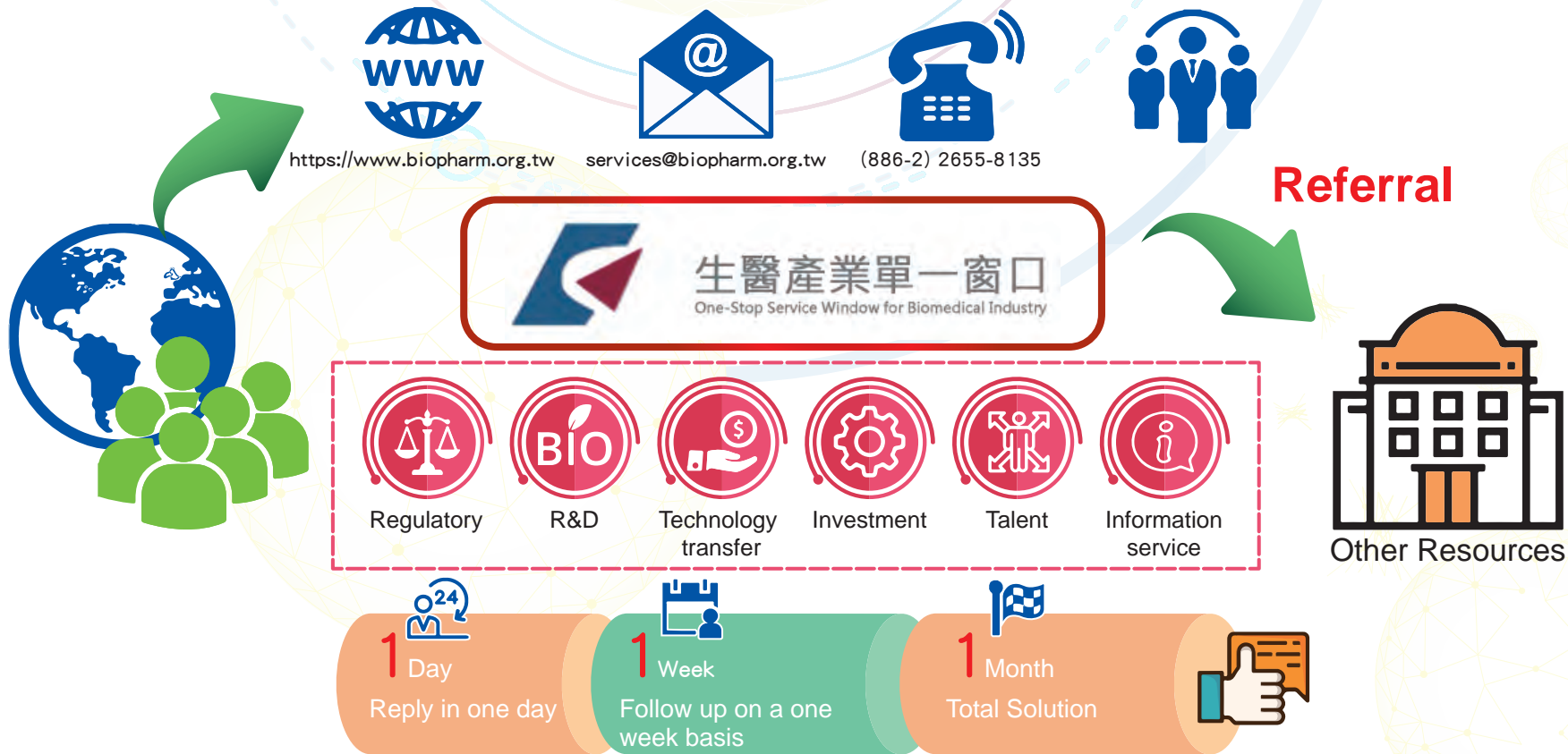


Responding to private sector's consultation needs, the One-Stop Service Window for the biomedical industry provides a convenient, comprehensive, and interactive platform connecting the professional resources and service capacities of various ministries through webpages, email, and social media. This 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 for international vendors, who are thus able to obtain information on the status of Taiwan's biotechnology industry and related investment incentives and 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

 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

 www.biopharm.org.tw

 services@biopharm.org.tw



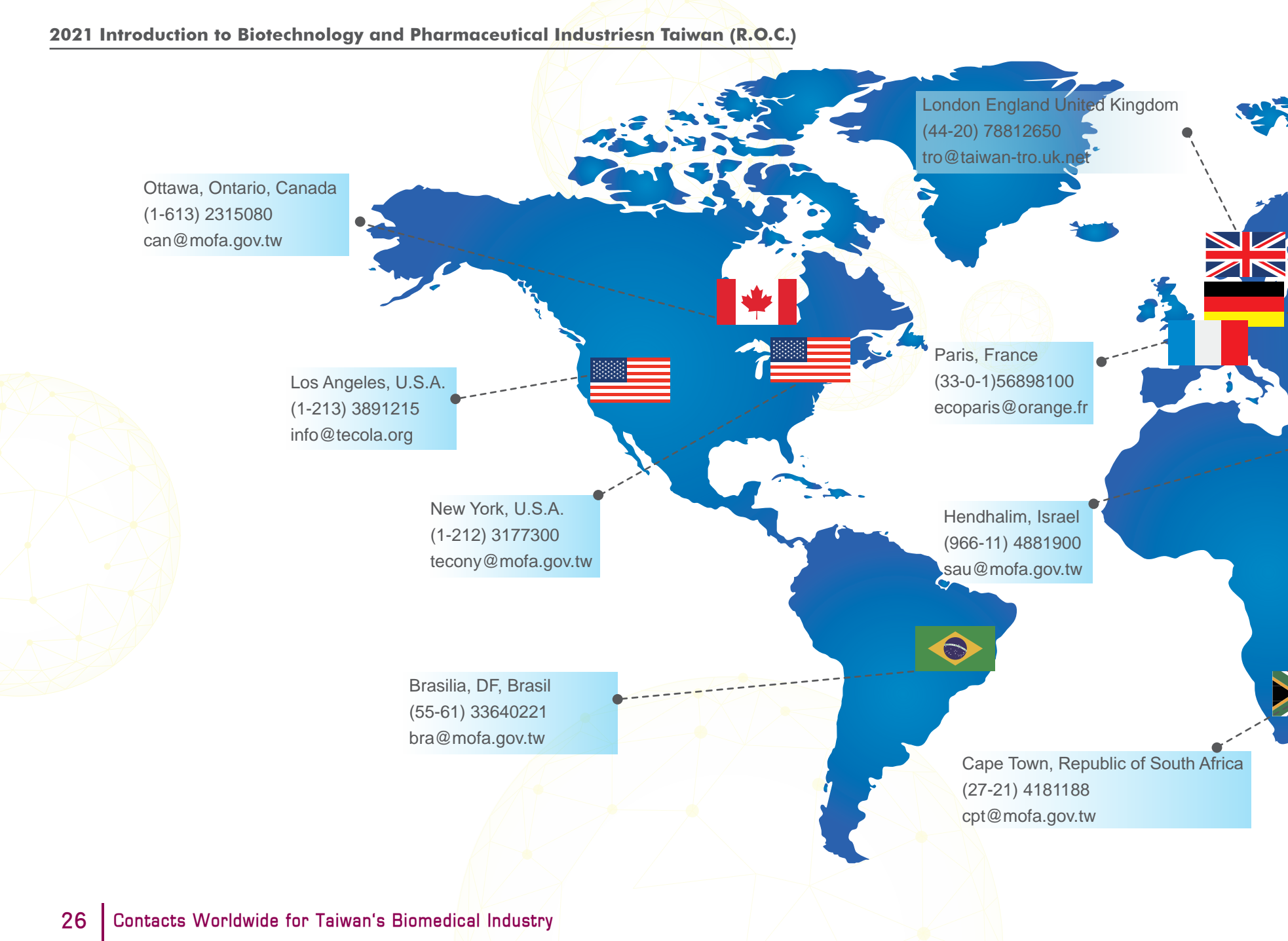
InvesTaiwan Service Center, MOEA

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>





Ottawa, Ontario, Canada
(1-613) 2315080
can@mofa.gov.tw

Los Angeles, U.S.A.
(1-213) 3891215
info@tecola.org

New York, U.S.A.
(1-212) 3177300
tecony@mofa.gov.tw

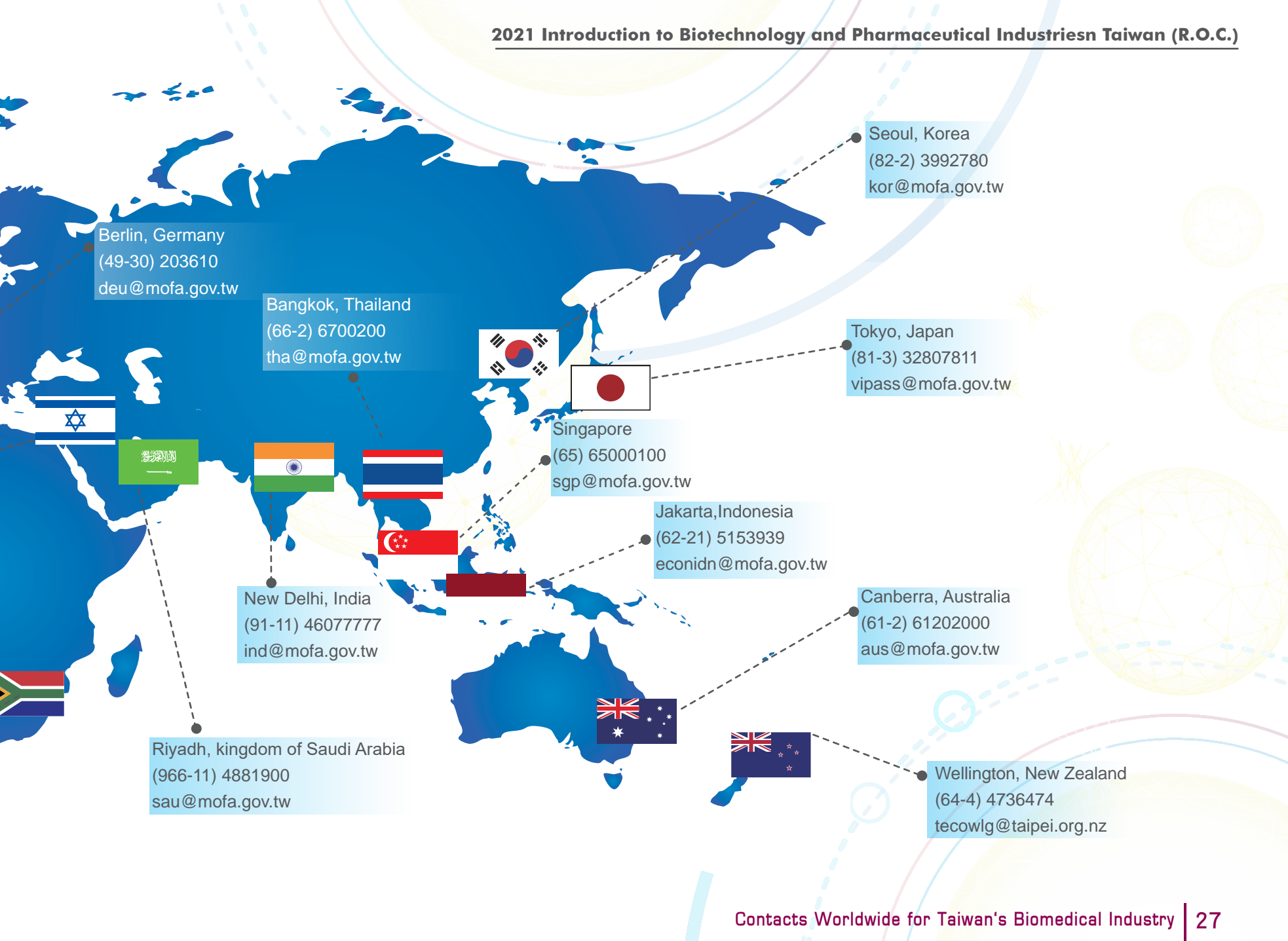
Brasilia, DF, Brasil
(55-61) 33640221
bra@mofa.gov.tw

London England United Kingdom
(44-20) 78812650
tro@taiwan-tro.uk.net

Paris, France
(33-0-1)56898100
ecoparis@orange.fr

Hendhalim, Israel
(966-11) 4881900
sau@mofa.gov.tw

Cape Town, Republic of South Africa
(27-21) 4181188
cpt@mofa.gov.tw



Berlin, Germany
(49-30) 203610
deu@mofa.gov.tw

Bangkok, Thailand
(66-2) 6700200
tha@mofa.gov.tw

Seoul, Korea
(82-2) 3992780
kor@mofa.gov.tw

Tokyo, Japan
(81-3) 32807811
vipass@mofa.gov.tw

Singapore
(65) 65000100
sgp@mofa.gov.tw

Jakarta, Indonesia
(62-21) 5153939
econidn@mofa.gov.tw

Canberra, Australia
(61-2) 61202000
aus@mofa.gov.tw

Wellington, New Zealand
(64-4) 4736474
tecowlg@taipei.org.nz

New Delhi, India
(91-11) 46077777
ind@mofa.gov.tw

Riyadh, kingdom of Saudi Arabia
(966-11) 4881900
sau@mofa.gov.tw



Bravo!

Biotechnology Taiwan

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

2021 Introduction to Biotechnology and Pharmaceutical Industries in Taiwan (R.O.C.)

Publisher: Industrial Development Bureau, Ministry of Economic Affairs

Address: No. 41-3, Sec. 3, Xinyi Road, Da'an District, Taipei City 106, Taiwan

<https://www.moeaidb.gov.tw>

Tel: (886-2) 2754-1255

Fax: (886-2) 2706-1933

Editor: Biotechnology & Pharmaceutical Industries Promotion Office, Ministry of Economic Affairs

Address: Room A, 17F, No. 3, Park Street, Nankang District, Taipei City 11503, Taiwan

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

Tel:(886-2) 2655-8135

Fax:(886-2) 2655-8134

Publication Date: Oct. 2020

Revision: First Edition

Price: NT\$100 (COST)

Sales Center:

Wunan Cultural Plaza Bookstores

Address: No. 600, Junfu 7th Road, Beitun District, Taichung City 406, Taiwan (R.O.C.) Tel:(886-4) 2437-8010

<https://www.wunanbooks.com.tw>

Government Publications Bookstore

Address: 1F, No. 209, Songjiang Road, Zhongshan District, Taipei City 104, Taiwan (R.O.C.) Tel: (886-2) 2518-0207

<https://www.govbooks.com.tw>


The electronic file can be downloaded from <https://www.biopharm.org.tw>

ISBN:978-986-533-072-9

GPN:1010901402

The Industrial Development Bureau, Ministry of Economic Affairs reserves all rights. Those who wish to use this book, in its entirety or in portions, must seek the consent or written authorization from the Industrial Development Bureau, Ministry of Economic Affairs.

Contact Information:(886-2) 2754-1255 # 3916 Library



2021 Introduction to Biotechnology and Pharmaceutical Industries in Taiwan (R.O.C.)

Publisher : Industrial Development Bureau, MOEA

Address : No. 41-3, Sec. 3, Xinyi Road, Da'an District, Taipei City 10657, Taiwan (R.O.C.)

Tel : (886-2) 2754-1255

Fax : (886-2) 2706-1933

<https://www.moeaidb.gov.tw>

Publication Date : Oct. 2019

• Price : NT\$100 (COST)

ISBN : 978-986-533-072-9

GPN : 1010901402

ISBN:978-986-533-072-9

