



台灣健康產業國際化策略

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University

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社團法人國家生技醫療產業策進會 (IBMI)

Established Year: 2002

·**Board of Members:** Government Officials/ Leaders from Academia and Medical Centers/ Industrialist



Founded by the former president of the Legislative Yuan of Taiwan, Mr Jin-Pyng Wang, IBMI is an independent, not-for-profit organization voicing Taiwan-based health care industry, promoting interdisciplinary collaborations through its global platform, and creating policy dialogues between public and private sectors. On top of that, IBMI is also a trusted awarding and certification body to health care providers and an incubator to health care startups in areas of novel technologies, services and innovations.



Founder
Jin-Pyng Wang

Former president of
the Legislative Yuan,
Taiwan



President
Chi-Huey Wong

Scripps Family
Chair Professor of
the Scripps Research
Institute



Vice President
Barry Lam

Chairman & CEO
Quanta Group



Vice President
Pan-Chyr Yang

Academician of
Academia Sinica



Vice President
Chang-Hai Tsai

Chairman of the
Board of China
Medical University &
Health Care System



Supervisor
Wei-Jao Chen

Professor Emeritus,
Department of
Surgery, National
Taiwan University
College of Medicine

Our Board

The board members consist of leaders from hospitals and R&D institutes, and C-level representatives from electronics, ICT, biotech and pharmaceutical sectors. Currently, IBMI has more than 400 members from across industries relating to health care.

Healthcare

Chang Gung Memorial Hospital
Changhua Christian Hospital
China Medical University Hospital
College of Medicine National Taiwan University
Hualien Tzu Chi Hospital
Kaohsiung Medical University Hospital
MacKay Memorial Hospital
National Cheng Kung University Hospital
National Defense Medical Center
Shin Kong Wu Ho-Su Memorial Hospital
Show Chwan Memorial Hospital
Taichung Veterans General Hospital
Taipei Medical University
Taipei Medical University-Shuang Ho Hospital
Ten-Chen Medical Group
Tri-Service General Hospital
Wei Gong Memorial Hospital

Research & development

Development Center of Biotechnology
Industrial Technology Research Institute
KPMG in Taiwan
National Health Research Institutes

Electronic & ICT

Advantech Co., Ltd.
Catcher Technology Co., Ltd.
Foxconn health technology business group
iKala Interactive Media Inc.
Pegatron Corp.
Powerchip Semiconductor Manufacturing Corp.
Qisda Corp.(BenQ)
Realtek Semiconductor Corp.
Topco Group
Wistron Corp.

Bio-Pharmaceutical

Bora Pharmaceuticals Ltd.
Maywufa Biopharma Group
Missioncare Medicine Co. Ltd.
St.Shine Optical Co., Ltd.
CHC Healthcare Group
Orient Pharma Co., Ltd.

380
Core Members

FOXCONN

ADVANTECH

BENQ

REALTEK
瑞昱半導體股份有限公司

CATCHER
smart process

WISTRON

PEGATRON
和碩聯合科技

TSC
聚鼎科技

PSC
力晶半導體

Powerchip Semiconductor Corp.

iKala

Integrate resources and promote the biomedical and healthcare industry

Policy Think Tank

- Act for the Development of Biotech and New Pharmaceuticals Industry.
- Cross-Strait Cooperation Agreement on Medicine and Public Health Affairs.
- Amendment of the Fundamental Science and Technology Act.
- The Human Biological Database Management Act
- Pharmaceutical Affairs Law and Medical Care Act
- 33 biomedical policies

Partnership & Collaboration

- Healthcare + Expo Taiwan
- Taiwan Healthcare + Portal
- MEDTEX Summit Asia
- International Hospital Leadership conference
- Bio Taiwan Highlights



Awards & Certification

- Symbol of National Quality (SNQ) accreditation & certification
- National Innovation Awards

Startup Incubation

- Allied with 36 Universities & Research Institutes
- Startup Angel investment

精準醫學與精準健康： 誰是未來大健康產業的藍海？



Precision Medicine 精準醫學

精準診斷: NGS 基因定序、液體活檢、AI 輔助診療、POC 檢測、數位影像設備等

精準治療: 標靶藥物、細胞治療、免疫治療、粒子治療、手術機器人等

醫療照護: 智慧醫院、智慧病房、智慧照護等

Precision Health 精準健康

風險評估: 風險基因、行為模式、家族病史

精準篩檢: 精準個人化健檢、AI 輔助早期檢測、居家篩檢、智慧遠距諮詢等

健康促進: 生活習慣、環境調適、個人化飲食、營養和運動、腸道菌相、居家及穿戴式健康管理裝置等

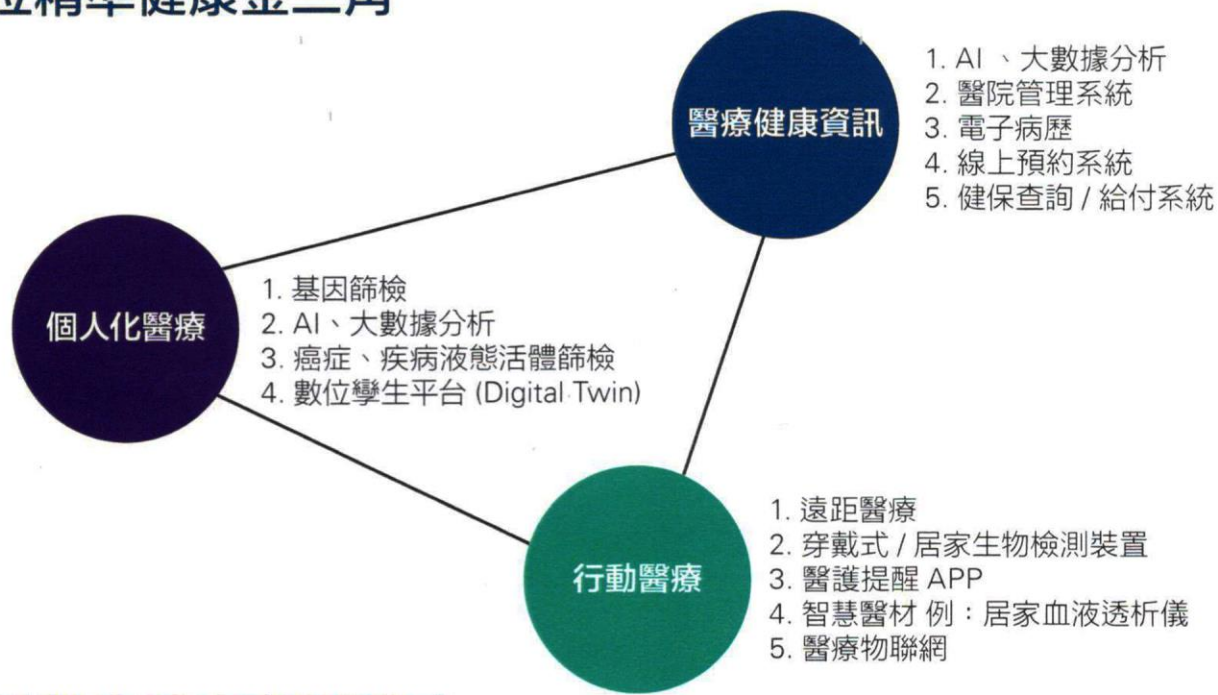
精準健康 3 大數位領域



台灣數位精準健康發展可分為使用大數據、AI 分析的醫療健康資訊 (Health IT)，使用 App、穿戴式裝置的行動醫療 (mHealth)，以及整合科技、醫療數據對症下藥的個人化醫療 (personalized medicine)。這不僅是全球生醫產業的投資趨勢，在台灣吸引了台達電、緯創、佳世達、鴻海、瑞昱等半導體廠跨界投資，對即將步入超高齡社會的台灣來說，這 3 大領域更是迅速數位轉型的佈局關鍵。

台灣精準健康產業 - 數位科技篇

數位精準健康金三角



了解更多服務內容



home.kpmg/tw/healthcare

Key drivers of Taiwan's healthcare industry

Advanced Medical Care

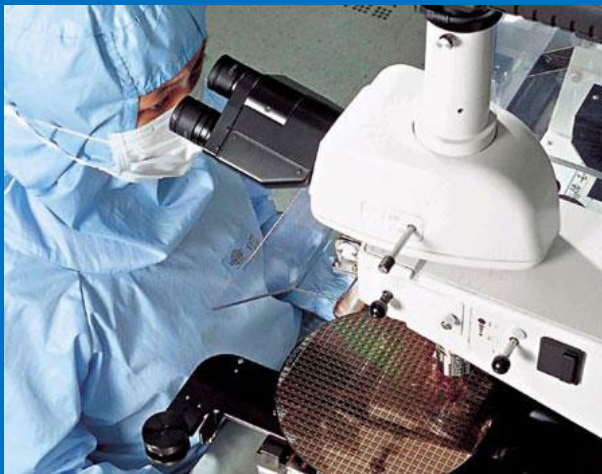


High Quality R&D and MFG



Strong ICT and Elec. Tech.





ICT



Hospital



Smart Hospital

Healthcare IoT
Platform












Health AI

Medical &
Wearable Devices

Hospital
Equipment

Taiwan's ICT Sector in Healthcare

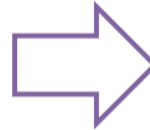
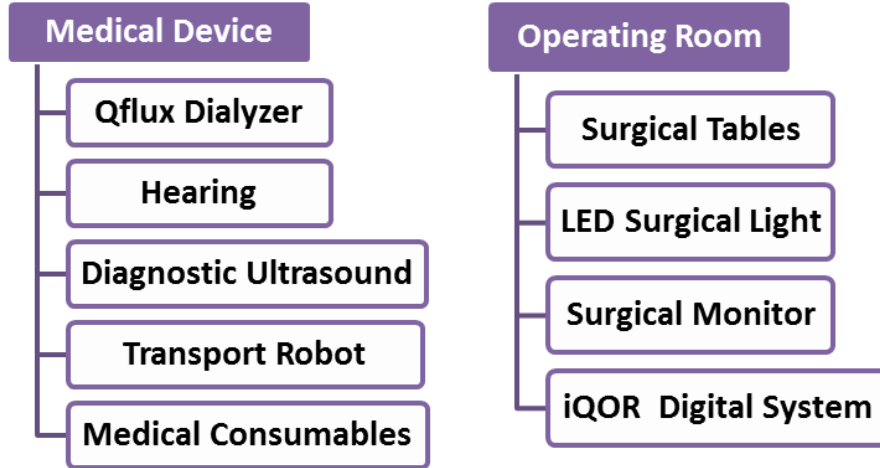
Precision Healthcare Industry

	Mobile health	Medical equipment	Smart hospital	Gene/cell therapy	Biomedicine	
Companies						
Product pipelines	<ul style="list-style-type: none">■ Tele-healthcare■ IoT solutions■ Wearables■ Health management	<ul style="list-style-type: none">■ X ray/ultrasound■ Micro CT■ Surgical robots■ Capsule endoscopy■ Hemodialyzer■ Pathology/AI Image■ Vital sign monitor	<ul style="list-style-type: none">■ Smart ward/operating room■ Surgical VR■ AI solution■ HMS■ EMR / EHR■ Medical display	<ul style="list-style-type: none">■ DNA sequencer■ DNA microarray■ Protein & genetic testing■ CTC system■ Cellular therapy	<ul style="list-style-type: none">■ AI chip■ Biochip for gene sequencing■ RF & Wireless chip■ Biosensor■ Display component■ Organic semiconductor	
Areas of application						

產業掌握翻轉醫療與健康科技的關鍵技術



Featured Products



Solutions

Smart Operation Room



ODM / OEM of
Medical Device

Other Smart Healthcare Solutions

Fitness System



Smart Wearables

Smart Ward

Health Management System

Long-Term Care Monitoring Solution

Taiwan leading hospitals are expanding their productivity from building smart hospital...



彰化基督教醫院
CHANGHUA CHRISTIAN HOSPITAL



員林基督教醫院
Yuanlin Christian Hospital



U.S. Green Building Council
LEED Gold Level Certification on
Dec, 2015

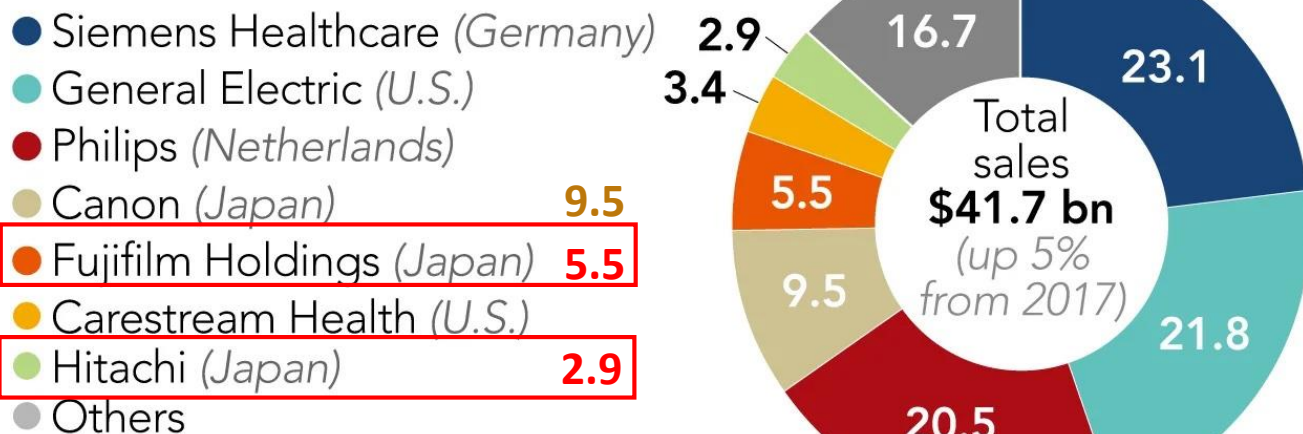


ICT Players launch
products and solutions:

- ◆ Smart Nurse Station
- ◆ Smart Ward
- ◆ Smart Clinic
- ◆ Smart Counter
- ◆ Smart Dialysis
- ◆ Smart Operation Room
- ◆ Multimedia interaction
- ◆ Accompany robot
- ◆ Logistics Management



Diagnostic imaging equipment global market share by sales (2018, in percent)



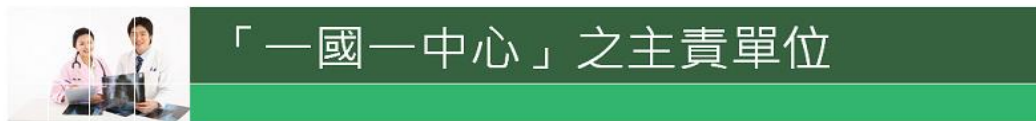
Source: Evaluate

8.4+ 9.5 =17.9 (Japan)

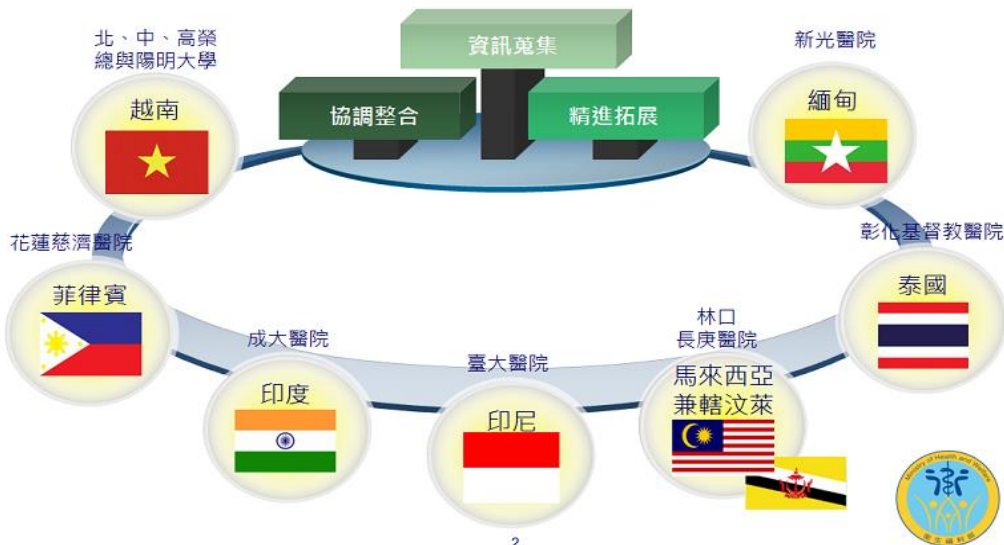
2月18日，富士表示：「兩家企業合併後，會將各自影像處理和人工智慧軟體和日立超音波、MRI 結合，**打包販售給醫療機構。**」 **To provide the total solution!**

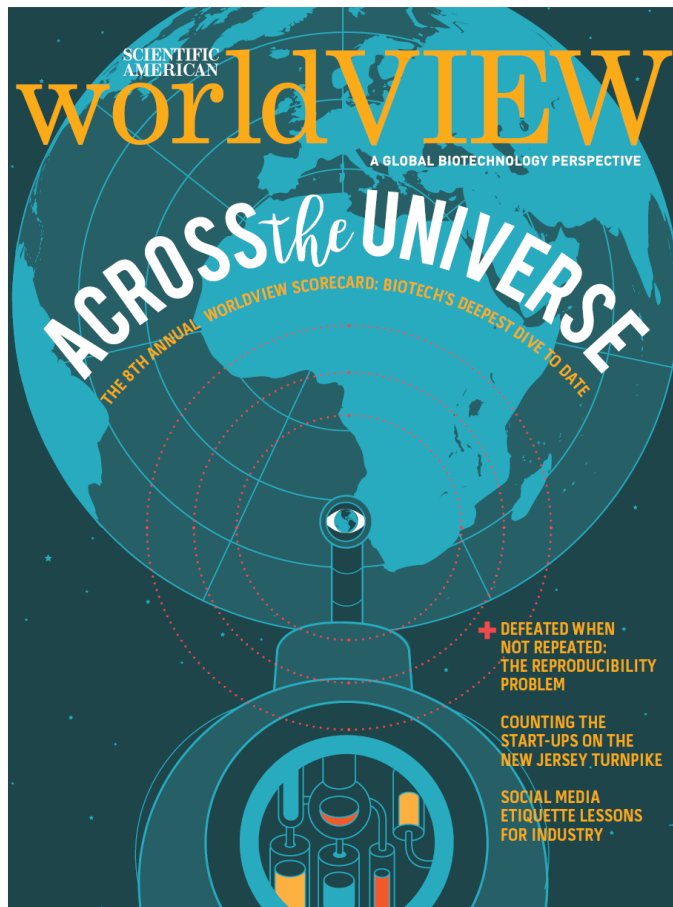
- ❑ Taiwan has become the most important exporting **Smart Hospital Solution** country in Asia.
- ❑ Offer **total solutions** to assist Asia countries to build smart hospitals or improve hospital management effectiveness.

- Thailand (彰基)
- Malaysia (長庚)
- India (成大)
- Vietnam (榮總)
- Indonesia (台大)
- Philippine (慈濟)



透過委託具醫學中心量能之機構，在當地執行一國一中心計畫。





2016 & 2020 Scientific American

WORLDVIEW SCORECARD

-  **PRODUCTIVITY**
-  **IP PROTECTION**
-  **INTENSITY**
-  **ENTERPRISE SUPPORT**
-  **EDUCATION/WORKFORCE**
-  **FOUNDATIONS**
-  **POLICY & STABILITY**



Enhanced with a new guidebook and region-specific ratings, the 2016 Scorecard ventures deeper than ever to track down the latest in biotech innovation

Taiwan, Country Rank 23 / 54 **2020**

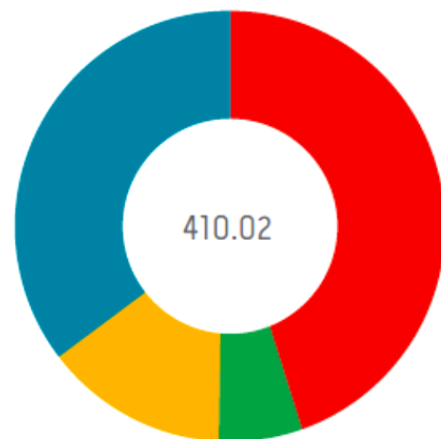
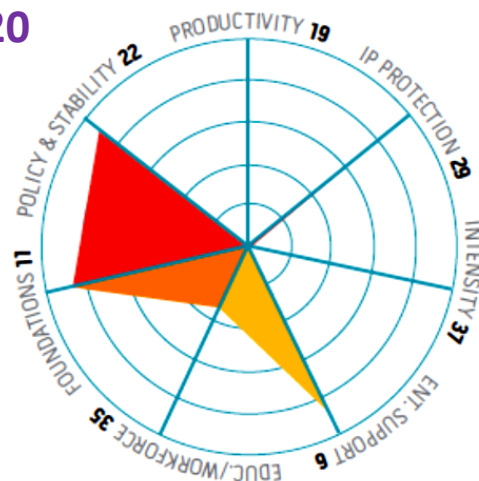
SAVV SC rank: 23

Population: 23,359,928

GDP: 489

R&D/GDP: 0

With an overall average of 22.4 on the SC, Taiwan's ranking of 23rd in 2016 is just about on par, and it performs even better on the *Nature Index 2015 Global*, with an 18th place overall ranking and its National Taiwan University landing in the top 100. Moreover, Taiwan advertises its biotechnology capabilities through international events, including BioTaiwan 2016. This will be the 14th annual event, and it will include presentations from companies around the world, as well as one-on-one partnering, seminars and workshops. A large exhibition is also expected, including more than 1,200 booths from 600 companies. On



August 20, 2015, *Taiwan Today* reported, "A wide-ranging development plan targeting Taiwan's biotechnology-based economy is set to kick off next year, according to Premier Mao Chi-kuo." The report continued: "Focusing on agriculture, biomedicine, food, health care and medical instruments, the 10 year initiative will potentially expand the scale of the local bioeconomy to

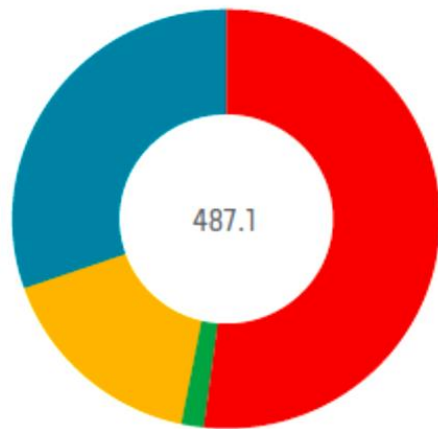
NT\$4 trillion (US\$123.2 billion) in 2026." With respectable scores on the SC's Foundations and Enterprise Support categories, Taiwan's commitment to innovation is clear. Like many other countries, however, **Taiwan's Education/Workforce category** shows room for improvement.

2016 Scientific American Worldview -A Global Biotechnology Perspective

Asian Countries' Performance

Country	Global Ranking	Productivity	IP Protection	Intensity	Enterprise Support	Education/ Workforce	Foundations	Policy & Stability
Singapore	2	---	8.3	3.8	9.2	4.5	6.6	9.6
Hong Kong	11	0.0	7.1	1.6	8.6	1.6	6.7	9.0
Japan	15	0.1	9.2	0.6	4.5	3.6	7.9	8.0
Taiwan (Score/Rank)	23	0.0/19	5.8/29	0.1/37	7.0/6	2.6/35	6.9/11	7.2/22
South Korea	24	---	5.6	0.6	4.8	3.9	8.3	6.3
Malaysia	27	---	5.5	1.1	8.0	2.1	4.9	5.9
China	41	0.1	4.7	0.6	4.5	1.3	4.0	2.9
Thailand	45	---	2.3	3.0	3.4	2.7	3.0	1.8
India	49	0.0	4.3	0.8	3.5	0.2	1.6	2.0

Source: 2016 Scientific American Worldview



Singapore

SAWV SC rank: 2

Population: 5,567,301

GDP: 298

R&D/GDP: 2

Singapore can boast a top 10 finish throughout the SC's history, and a top five finish in every year except 2011. It also scores well on other measurements: 15th for output in the *Nature Index 2015 Global*, with more than half of the publications in chemistry; and fifth on the 2015 BCI index, which stated: "Singapore has relatively strong

In part, ongoing investment in science and technology explains Singapore's high ranking.

capabilities in R&D and manufacturing, with most of the necessary regulatory frameworks and safeguards in place and in line with international best practices." In part, ongoing investment in science and technology explains Singapore's high ranking. On January 12, 2016, for example, *ScienceInsider* reported, "The government of Singapore has announced that it plans to spend [US\$13.2 billion] on research and development between 2016 and 2020." In addition, the National University of Singapore opened a US\$25 million synthetic biology center on September 30, 2015. Other news reveals the allure of Singapore as an international leader in science. For instance, Rockefeller University plant molecular biologist Nam-Hai Chua announced plans to move his research—exploring plant RNA's impact on drought tolerance—to Singapore's Temasek Life Sciences Laboratory. Indeed, Singapore is a go-to country for biotechnology research, as well as for R&D in general.

Country Rank

2 / 54

2020

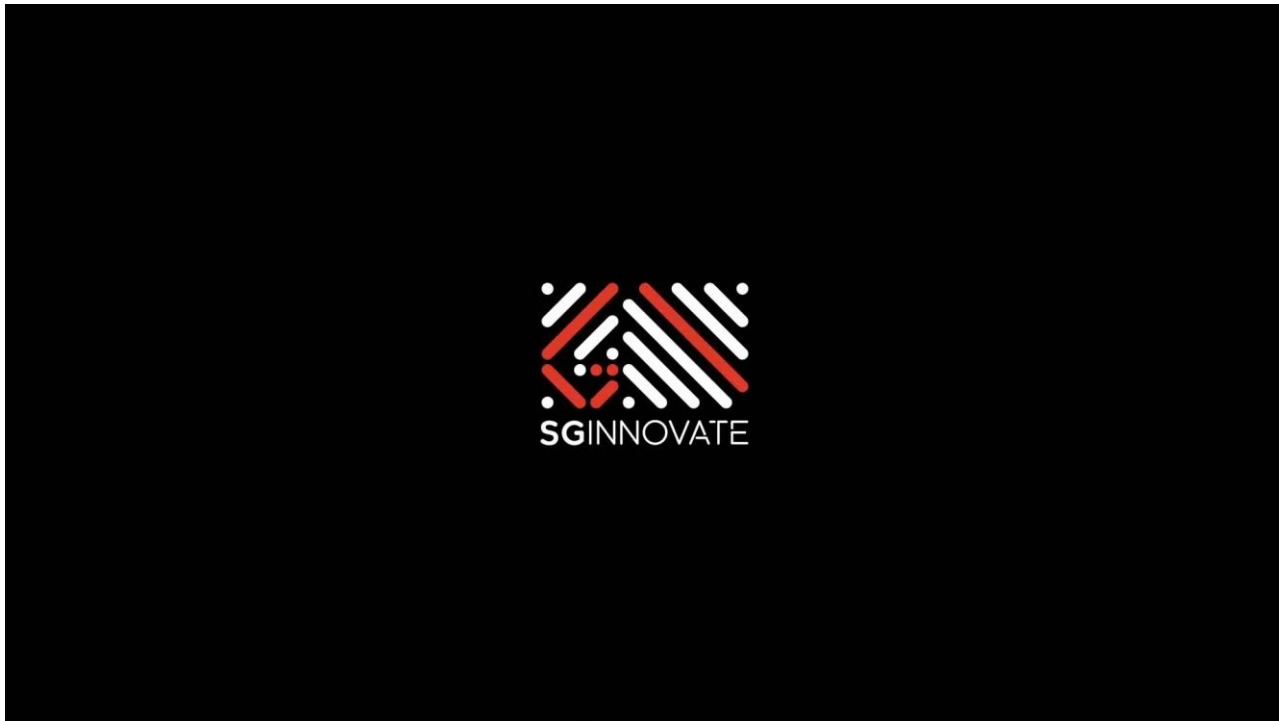
The top-ranked countries in *Government effectiveness* are [Singapore](#), [Switzerland](#), and [Finland](#).

新加坡：非常積極推動生技產業國際鏈結，已成功扮演亞太地區領頭羊的角色。針對國際華人健康市場之拓展，臺灣是可以嘗試與新加坡合作，創造雙贏的機會。

The top-ranked countries in *Regulatory quality* are [Singapore](#), [Australia](#), [Canada](#), [Finland](#), [Hong Kong](#), [New Zealand](#), and the [United Kingdom](#). Source data from *Scientific American Worldview* (<http://www.saworldview.com>)



2019年5月23日新加坡
Medtech Connect 論壇



SGInnovate interview: <https://youtu.be/3ktQSyfe7n0>

Thailand

Country Rank

45 / 54

SAVV SC rank: 45

Population: 67,741,401

2020

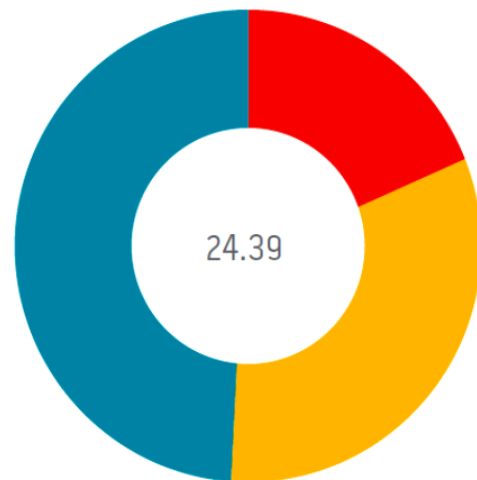
GDP: 387

R&D/GDP: 0.39

Between 2014 and 2016, Thailand bounced around the 40s in the SC rankings—from low to high and back to the mid-40s. Even so, this is a far better showing than its bottom-of-the-list performance in 2013. Similarly, Thailand ranked 42nd on the *Nature Index 2015 Global*. On the plus side, its National Biotechnology Policy Framework aims to push the country much higher as an international force in the industry. In particular, that framework seeks to improve biotechnology education and training. Among the SC categories, Thailand already performs the best in Education/Workforce, and the government's plans



could improve that capability even more. Experts are applauding Thailand's efforts so far, and express tempered optimism about its future prospects. A September 2015 USDA GAIN Report stated: "Thailand made some progress in 2015 on laying out a draft regulatory framework on adopting agricultural biotechnology. Thai biotech proponents are likely to gain more support from



policy makers in both government and parliament. However, it may take a few years to revoke a ban on biotech field trials in the country." Like many other countries that perform poorly on the SC, Thailand needs to drastically improve its IP Protection, as well as its reputation in the SC category of Policy & Stability. A strong biotechnology industry must do well in these areas.

泰國：是臺灣可與合作共同拓展國際生技產業的夥伴。特別在農業食品生技與國際醫療服務領域，或將有助營造互利共贏之機會。

The top-ranked countries in *Talent retention* are Saudi Arabia, Thailand, and Chile.

Source data from *Scientific American Worldview* (<http://www.saworldview.com>)



2019年7月10日生策會到泰國曼谷，受泰國醫材公會邀請演講，介紹 Taiwan Healthcare Plus



2019年7月11日參加彰化基督教醫院籌劃在曼谷東協醫材展上舉辦的臺灣醫材產品說明會

India

Country Rank

49 / 54

SAVV SC rank: 49

Population: 1,236,344,631 2020

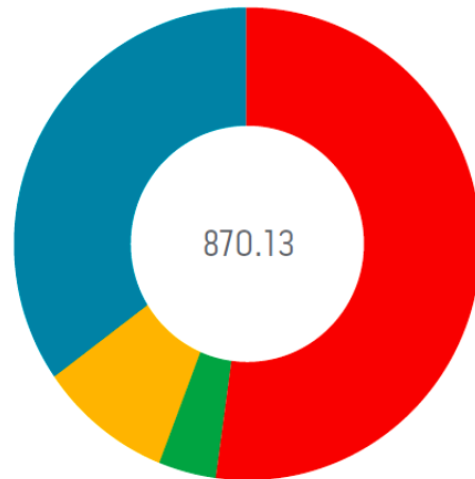
GDP: 1,877

R&D/GDP: 0.82

If effort alone equated with success in biotechnology, India might top the SC and other indices. At the end of 2015, India released a new National Biotechnology Development Strategy, and some of its key goals included generating biotechnology products, increasing bio-manufacturing and producing biofuels. In fact, Shell India Markets plans to build a biofuel plant in Bangalore. Its 13th place ranking on the *Nature Index 2015 Global* suggests that some of India's efforts are paying off. Also, on January 8, 2016, an online article from *Nature Biotechnology* reported: "Most new companies emerging in the GM field are based in the United States and in Asia,



especially India, whereas public developers of the technology are appearing in India and China." Nonetheless, the 2015 BCI described India as facing a "struggling ability to compete," and noted: "India possesses the foundation and potential for becoming a hub of biopharmaceutical innovation—but currently faces several major structural barriers to moving up



from the bottom ranks in biomedical competitiveness. Local executives particularly noted the presence of major regulatory deficiencies and bottlenecks and very limited coverage of medicines, even with costs driven down. In addition, they highlighted major gaps in India's biopharmaceutical IP protection that render the system overall ineffective."

印度：在國際產業市場佈局上是不容忽視的人口大國，特別是與人密切相關的健康產業。與印度還算友善的臺灣可仿效日本模式，先投資在人才，再拓展未來廣大的市場。

India scored 0.03/10, in **Productivity** which places it 17th of the 54 countries studied. India was tied with Finland and Ireland and Taiwan.

India scored 0.77/10, in **Intensity** which places it 26th of the 54 countries studied. India scored ahead of China and Austria.

Source data from *Scientific American Worldview* (<http://www.saworldview.com>)



2019年5月14日 參加印度經貿訪問團在Bangalore 的招商活動。並參與竹科管理局在 Bangalore 主辦的 Taiwan-India Medical Cooperation Forum.

印度理工學院海得拉巴校區

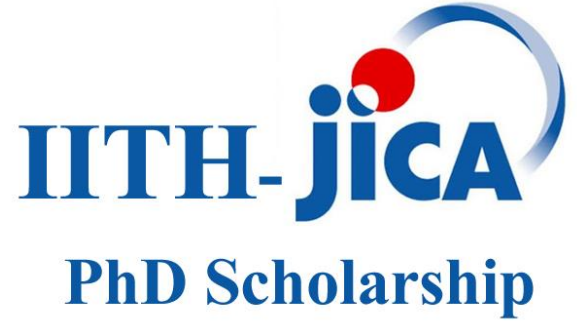
Indian Institute of Technology

Hyderabad is a public technical and research university located in Sangareddy district, Telangana, India.



भारतीय प्रौद्योगिकी संस्थान हैदराबाद
Indian Institute of Technology Hyderabad

Japan International Cooperation Agency

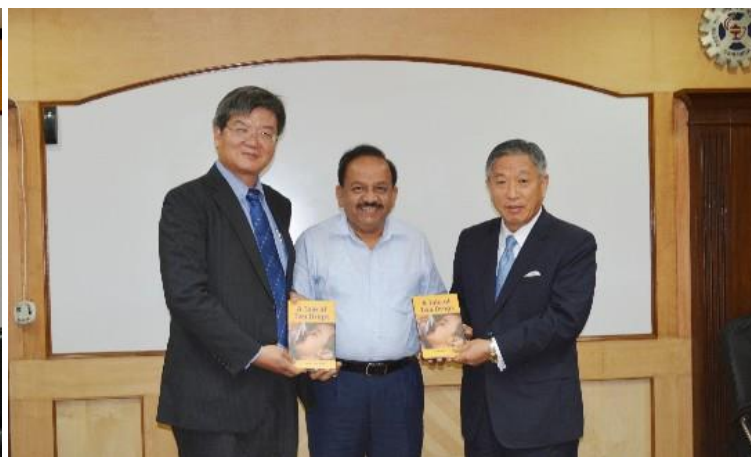
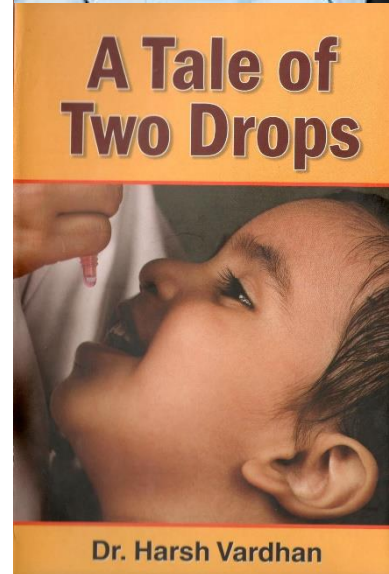


Apple's 1st Campus
Placement In India

Nov 6, 2017

Dr. Harsh Vardhan is an Indian [Otorhinolaryngologist](#) and the incumbent **Minister of Health and Family Welfare, Minister of Science and Technology** and **Minister of Earth Sciences**.

Dr. Harsh Vardhan was elected to the office of [Chairperson of Executive Board of the World Health Organization](#) from May 22, 2020.



2015-07-20 科技部錢宗良次長及田中光大使拜會印度科技部長 Hon. Harsh Vardhan。
Hon. Vardhan部長並於會中致贈著作” A Tale of Two Drops”予錢次長及田大使。

Dr. Guljit Chaudhri Chief, Managing Director of Innovation, ABLE (Association of Biotechnology Led Enterprises)

Guljit started her career with international business, strategic alliances including joint ventures and domestic marketing of pharmaceuticals.

India: one of the observers of ICH*

*The International Council for Harmonization of Technical Requirements for Pharmaceuticals for Human Use (ICH)



2019-05-17 拜訪 Invest Inida, 邀請 Dr. Guljit Chaudhri 來台參加 EXPO



2019-12-05 Dr. Guljit Chaudhri 來台參加Taiwan Healthcare EXPO

印度在全球仿製藥市場佔據主導地位，2017年/18年度(4-3月)藥品出口規模達到173億美元，包括對美國和歐盟的出口。其中對中國的出口僅佔1%。



2018年7月18日，中國國務院總理李克強就電影《我不是藥神》引發輿論熱議作出批示，要求有關部門加快落實抗癌藥降價保供等相關醫療改革措施。

Bring together & Link together!



Healthcare EXPO · TAIWAN 台灣醫療科技展



106,769+



參觀人次



23,800+

國內專業人士



19,800+

國內一般民眾



30 位

國際產業協會



1,800 位

重磅會議論壇

8大主題

2020 醫療科技展

550個參展機構與企業、1580個展位



2大特展

InnoZone 創新技術特展 150個新創技術團隊



50大防疫創新科技特展



疫後新經濟·新契機

讓世界看見台灣醫療的能量 政府與產業攜手打造疫後醫療大健康產業新局



蔡英文 總統

健康產業發展的每一步，都是臺灣走向世界的重要一步！台灣醫療科技展超前佈署、已是我們跟國際交流，共同發展創新技術、智慧解決方案、數位健康科技的重要場域！政府將努力持續推動，讓臺灣成為全球數位醫療轉型的基地。



賴清德 副總統

身為醫界的一份子，期勉教育部或各大醫學院也應納入醫療科技的專業知識，為台灣戰備產業的重要一環智慧及精準醫療領域，培育源源不絕的專業知識人才。



大會主席 游錫堃 立法院長

台灣醫療科技展是全民的驕傲！半導體、面板、生技產業、數位內容等兩兆雙星產業，在這裡完整呈現跨領域合作成果，大健康產業將是繼半導體之後台灣走向國際最大利基。



教育部生醫產業與新農業跨領域人才培育計畫

Training Program for Interdisciplinary Talents of Biomedicine and New Agriculture

2020台灣醫療科技展-種子教師培訓說明會

針對精準醫學、智慧醫材、健康福祉、精準農業四大領域種子教師導覽培訓

種子教師將協助同學參觀展會，獲得產業見習之機會。

參與種子教師導覽之同學，將獲得主辦單位提供產業見習時數證明

歡迎各領域教師帶領同學參觀台灣醫療科技展！

培訓對象

本計畫各領域推動中心及夥伴學校計畫主持人及各校有興趣之教師

培訓時間

109.11.16 (一) 下午14:00-16:00

培訓地點

臺灣大學醫學院 101講堂 (台北市仁愛路一段一號)

種子教師報名方式 (截止日期11.06)

有完成報名者將獲得主辦單位提供
種子教師導覽手冊及VIP展會導覽證



說明會報名連結

需產業見習時數之同學請洽各校種子教師，由種子教師統一報名，以取得入場參觀證



計畫報名：**893**人
自由報名：**463**人

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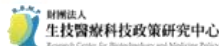
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