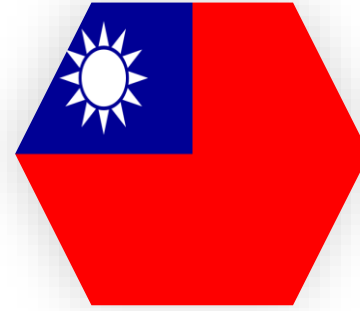


LIFE SCIENCE TREND ANALYSIS

TAIWAN | 2023



VENTURE VALUATION
GLOBAL VALUATION SERVICES



FEBRUARY 2023

ABOUT US



The following statistical information has been obtained from Biotechgate, a global, comprehensive life science database encompassing the biotechnology, pharmaceutical and medical device industries.

www.biotechgate.com



The Taiwan Life Sciences Database is a part of the global Biotechgate and is brought to you in partnership with the Taiwan Bio Industry Organization (TBIO).

www.taiwaneselifesciences.com



Biotechgate is owned and operated by Venture Valuation AG, a Zurich based company specializing in independent assessment and valuation of technology-driven companies in high growth industries, such as the life sciences (biotech, pharma, medtech), ICT, high-tech, nanotech, cleantech, and renewable energy.

www.venturevaluation.com

OUR PARTNER



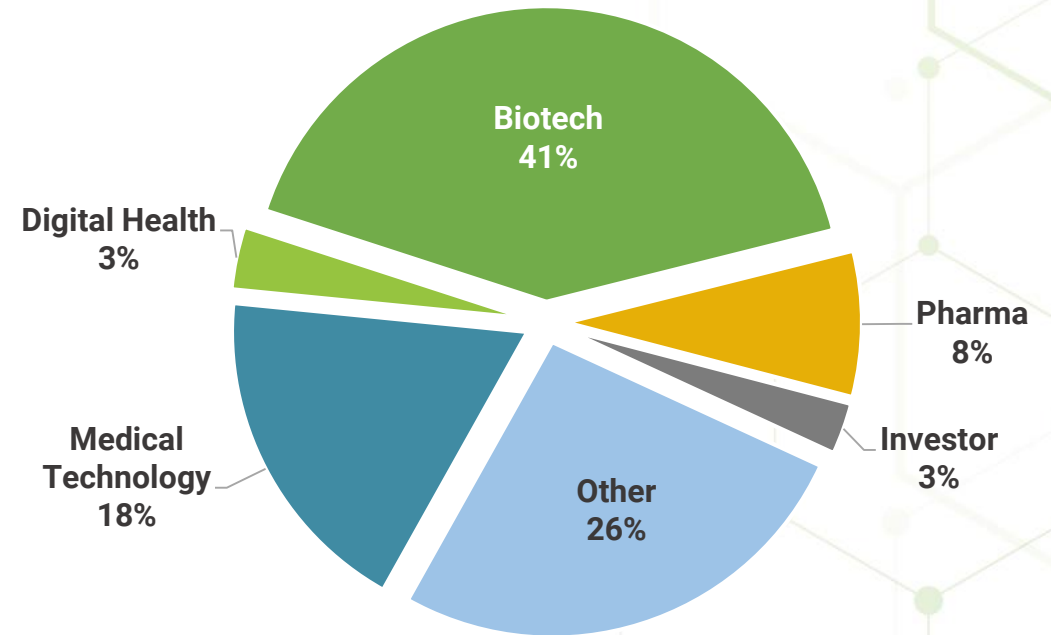
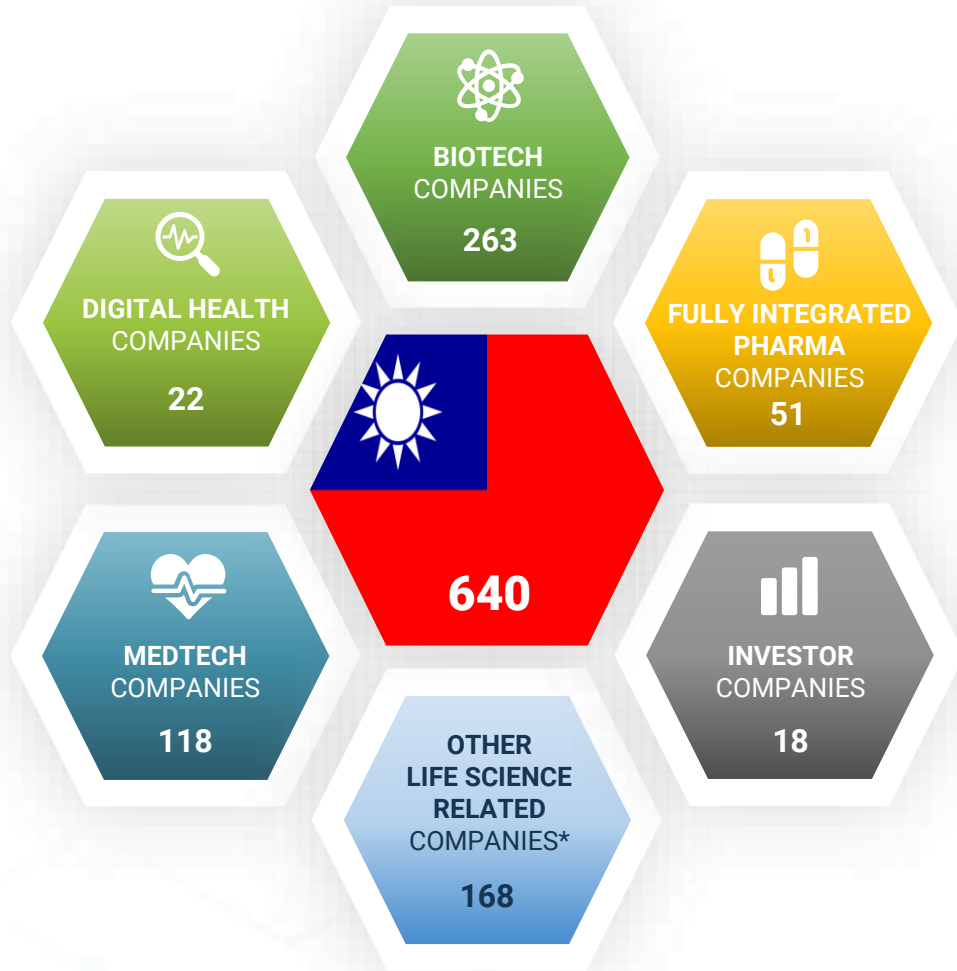
Taiwan Bio-Industry Development Association has been established in 1989 with its main purpose to combine the industry, relevant government departments and academia to jointly promote the bio-industry, so as to develop Taiwan's economy and improve the quality of life of the people.

Members cover biotechnology, pharmaceuticals, medical materials, diagnostics, agricultural biotechnology, food biotechnology and other manufacturers across the country. At present, there are more than 150 corporate members and about 4,000 association members.

www.taiwanbio.org.tw

OVERVIEW OF THE LIFE SCIENCE INDUSTRY

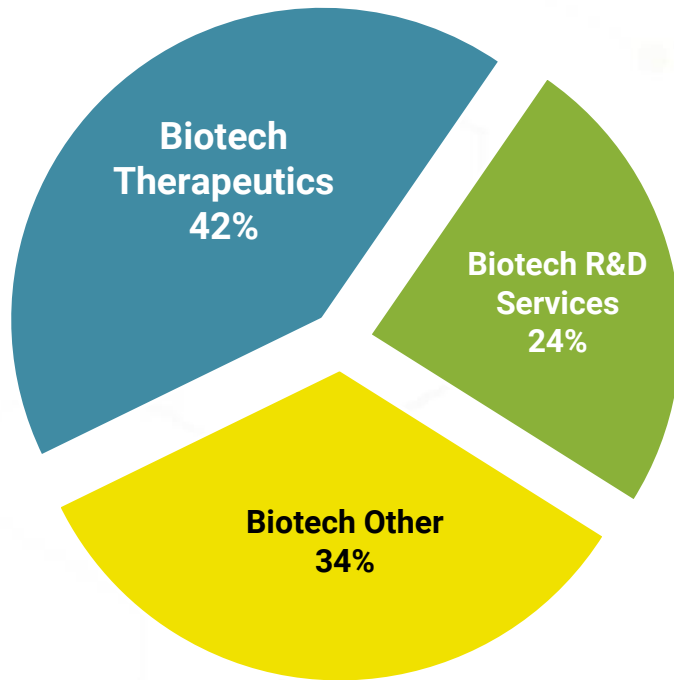
NUMBER OF COMPANIES BY SECTOR



For the definition of categories please visit www.biotechgate.com/web/cms/index.php/covered_industry_sectors.html. Biotech Companies include the following categories: Biotechnology – Therapeutics and Diagnostics; Biotechnology – R&D; Biotechnology – Other. *Other companies include professional services, NPOs, and supplier & engineering companies. Percentage value is expressed as % of total number of companies. Information displayed may alter as new information is received continuously.

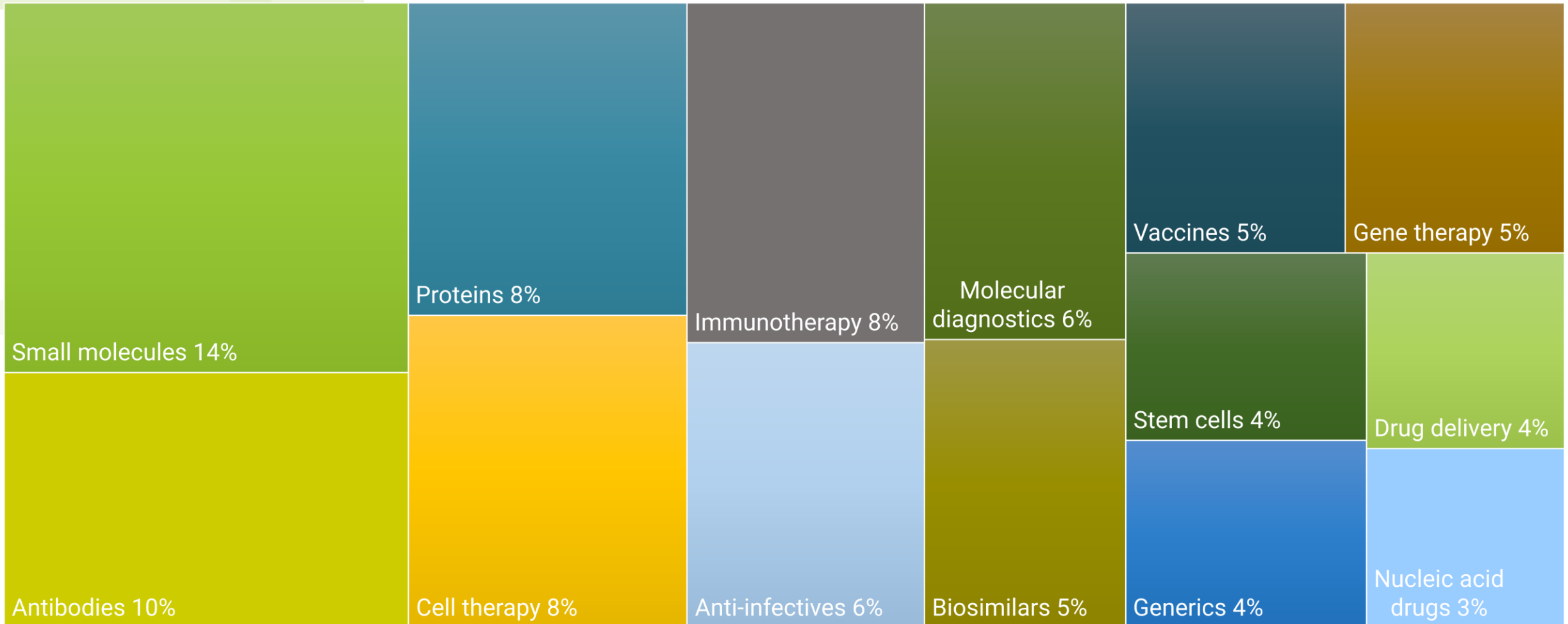
OVERVIEW OF BIOTECH COMPANIES

NUMBER OF COMPANIES BY SECTOR



BIOTECH - THERAPEUTICS COMPANIES BY KEY ACTIVITIES

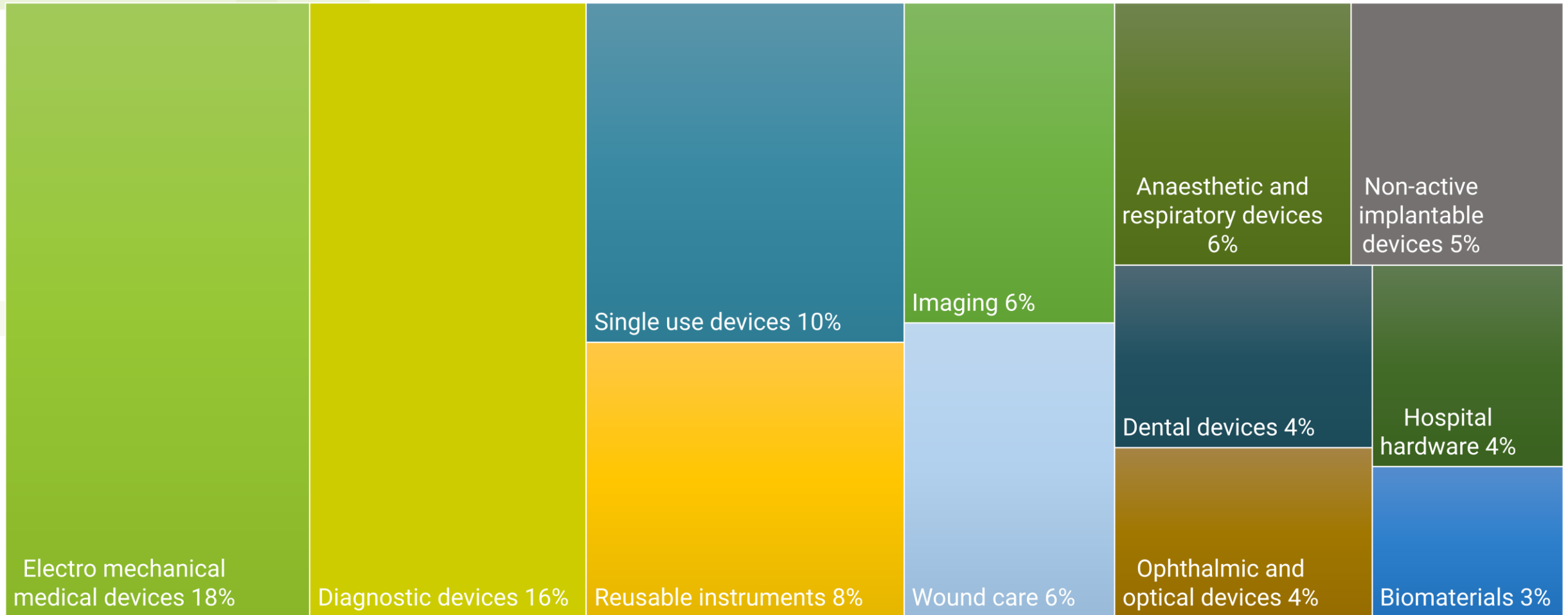
AS PERCENTAGE OF TOTAL NUMBER OF BIOTECH - THERAPEUTICS COMPANIES



For 110 Biotech Therapeutics companies there were 332 subsectors (key activity areas) assigned (one biotech company can be active in multiple areas). The graph displays Biotech – Therapeutics and Diagnostics subsectors as the percentage of the total number of Biotech – Therapeutics and Diagnostics subsectors with exclusion of the category Others. The company subsectors are regarded as the key activities of a company. For the definition of subsectors please visit www.biotechgate.com/web/cms/index.php/covered_industry_sectors.html. Information displayed may alter as new information is received continuously.

MEDTECH COMPANIES BY KEY ACTIVITIES

AS PERCENTAGE OF TOTAL NUMBER OF MEDTECH COMPANIES

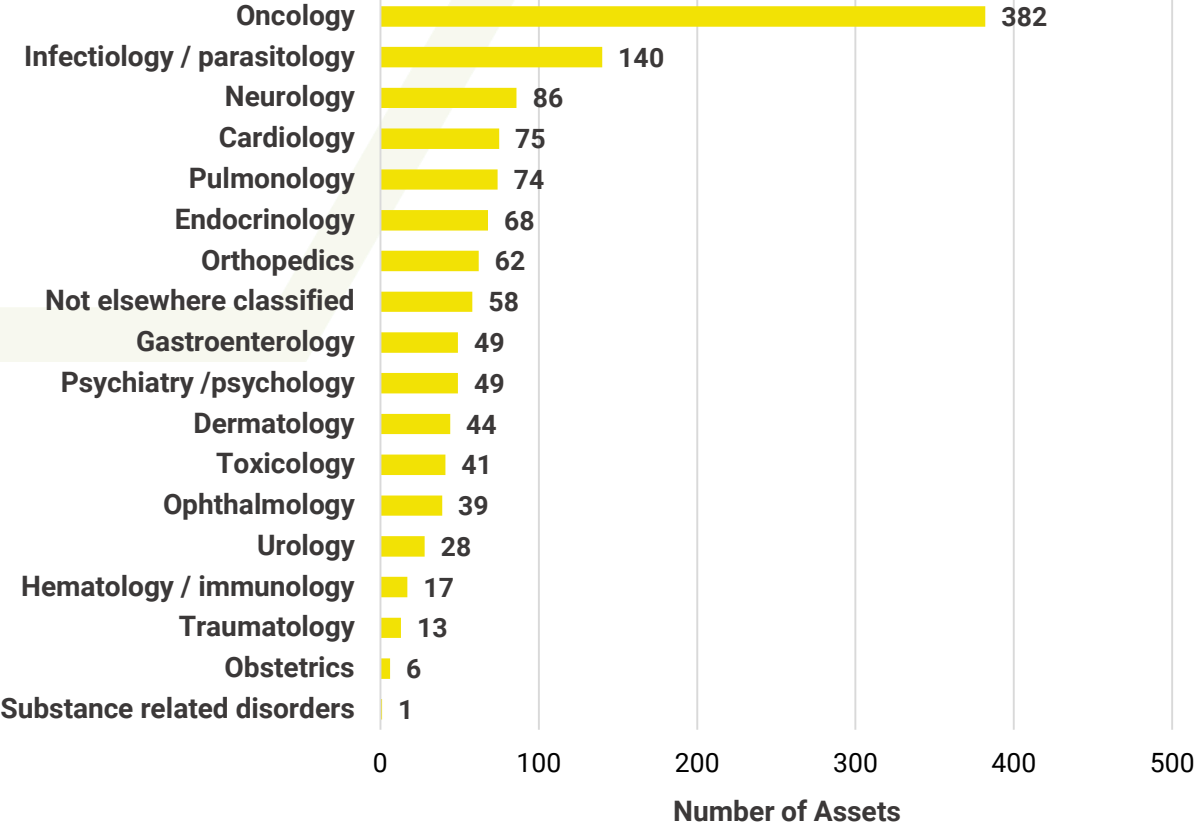


For **118** Medtech companies there were **365** subsectors (key activity areas) assigned (one medch company can be active in multiple areas). The graph displays Medtech subsectors as the percentage of the total number of Medtech subsectors with exclusion of the category Others. The company subsectors are regarded as the key activities of a company. For the definition of subsectors please visit www.biotechgate.com/web/cms/index.php/covered_industry_sectors.html. Information displayed may alter as new information is received continuously.

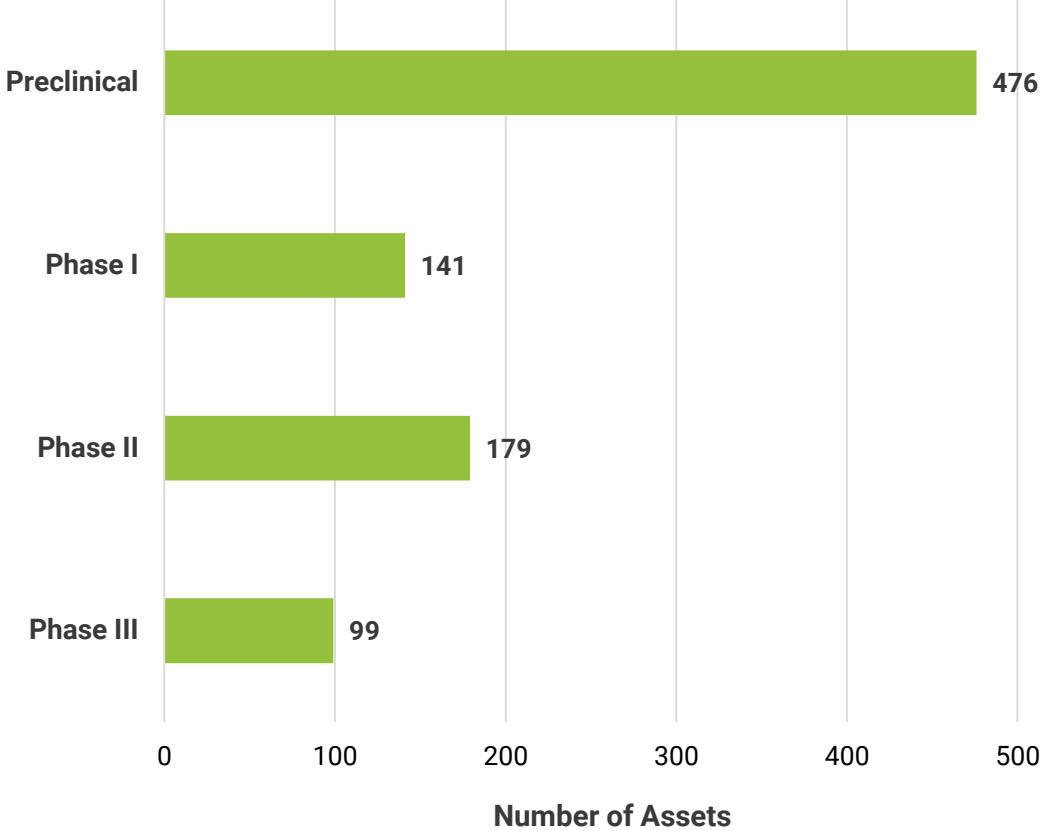
BIOTECH ASSETS IN CLINICAL DEVELOPMENT

BY INDICATION AND DEVELOPMENT PHASE

BREAKDOWN BY INDICATION



BREAKDOWN BY DEVELOPMENT PHASE

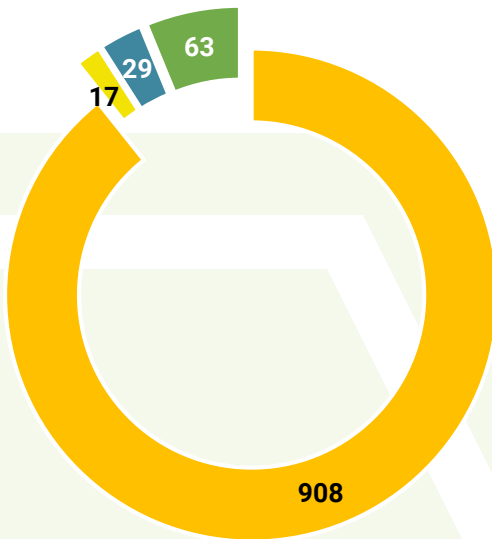


Both graphs contain the number of assets of Biotech – Therapeutics and Diagnostics companies (not incl. are Pharma or Biotech – Others or Biotech – R&D Services companies). Products in Discovery and Lead Optimization Phase are merged into Preclinical; Development Phase I/II trials are merged into Phase II and Phase II/III trials are merged into Phase III category. Information displayed in the chart may alter as new information is received continuously.

ASSETS AVAILABLE FOR OUT-LICENSING

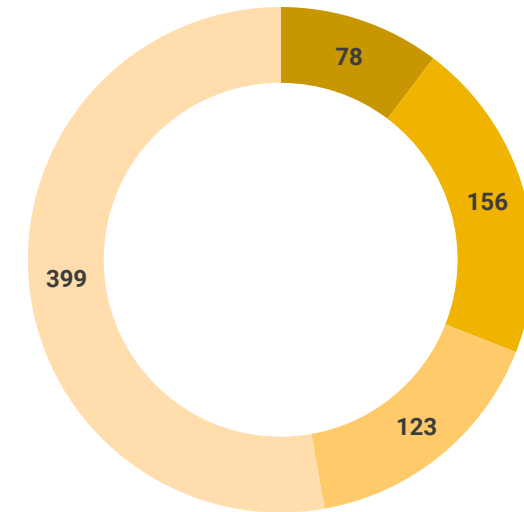
NUMBER OF ASSETS

BY ASSET CLASS



■ Therapeutics ■ Diagnostics ■ Medical Devices ■ Technologies

THERAPEUTICS BY DEVELOPMENT PHASE

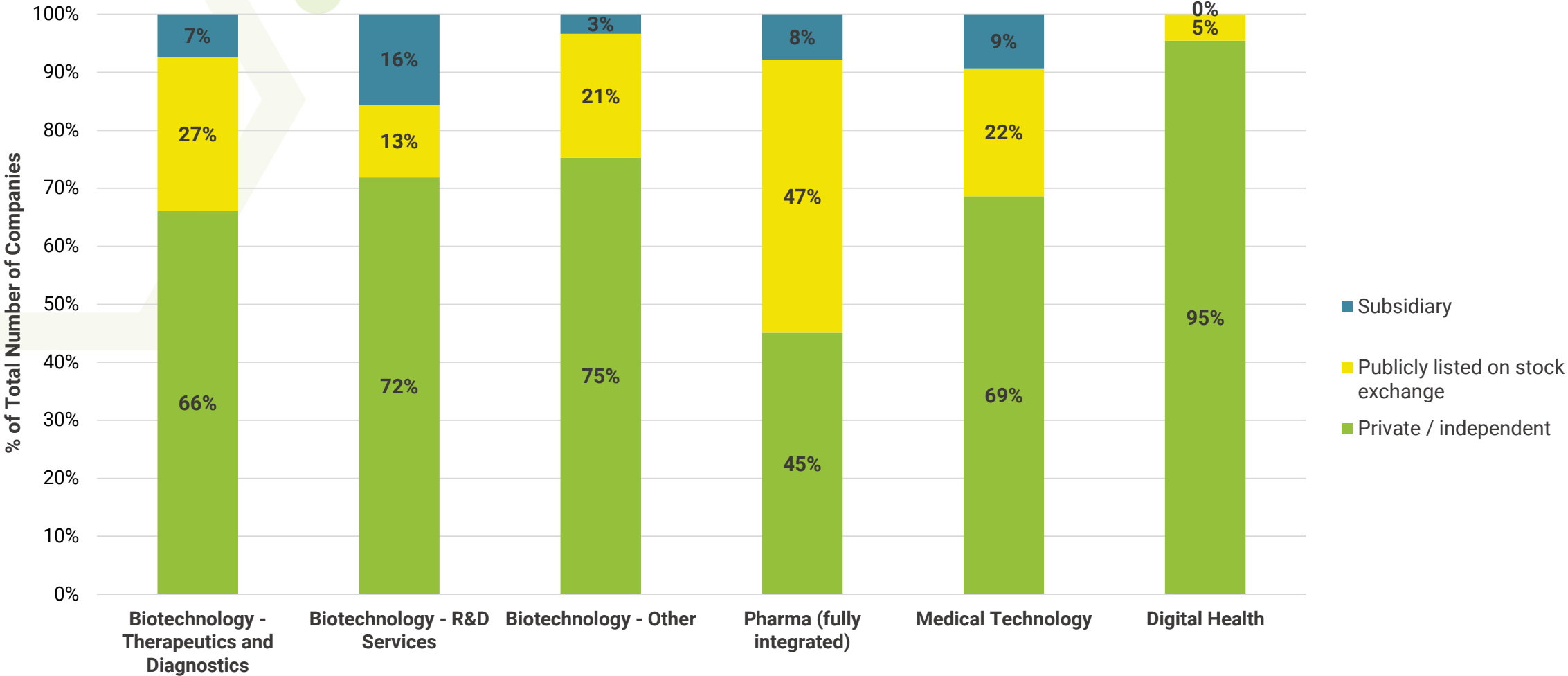


■ Phase III ■ Phase II ■ Phase I ■ Preclinical

The graph titled "Therapeutics by Development Phase" displays a subset of the asset class Therapeutics. Products in Discovery and Lead Optimization Phase are merged into Preclinical; Development Phase I/II trials are merged into Phase II and Phase II/III trials are merged into Phase III category.

OVERVIEW OF OWNERSHIP

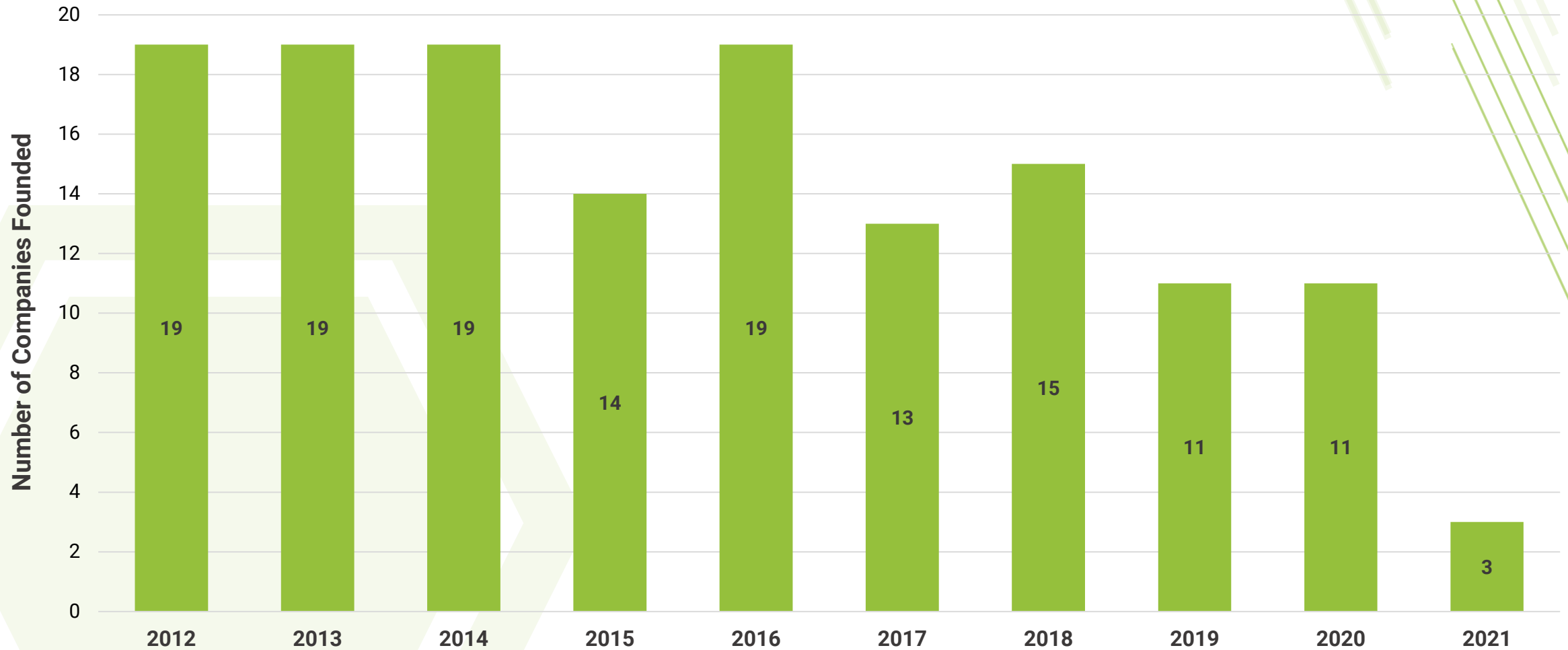
PERCENTAGE OF TOTAL NUMBER OF COMPANIES BY OWNERSHIP AND SECTOR



For the definition of categories please visit www.biotechgate.com/web/cms/index.php/covered_industry_sectors.html. Biotech T&D stands for Biotech Therapeutics and Diagnostics. Percentage value is expressed as % of total number of companies in the sector. Information displayed may alter as new information is received continuously.

COMPANY FOUNDATION TIMELINE

NUMBER OF LIFE SCIENCE COMPANIES FOUNDED BY YEAR | 2012-2021

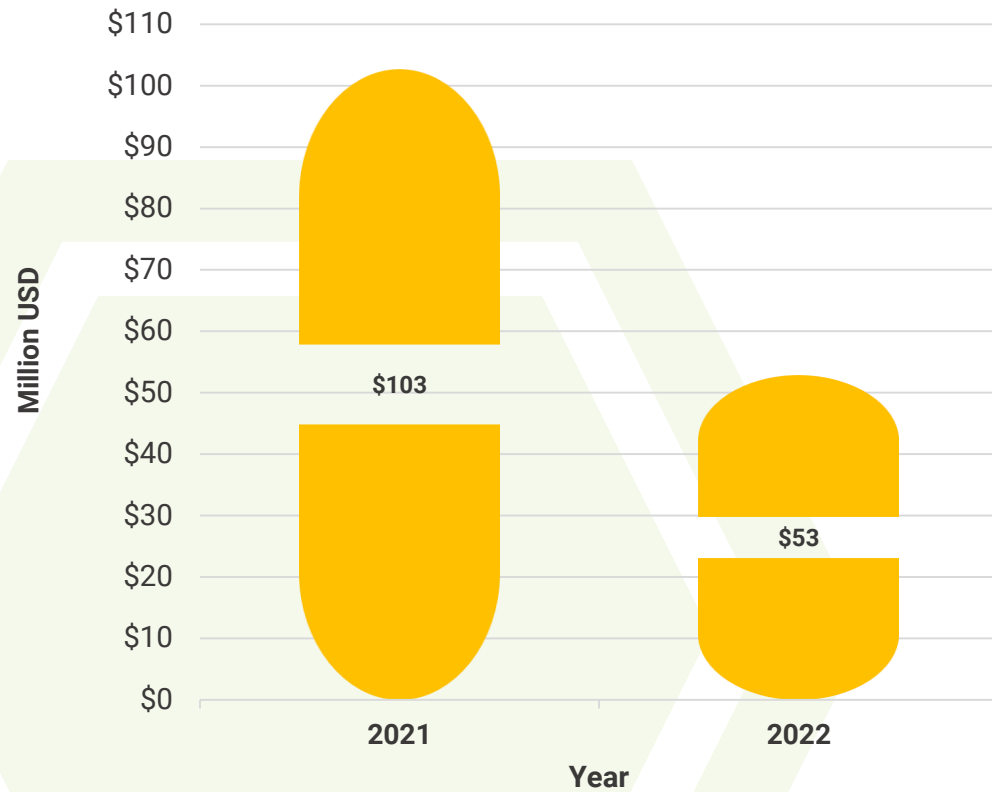


The graph contains the number of privately owned or publicly listed (no subsidiaries) life science companies founded by year including Biotech - Therapeutic and Diagnostic, Biotech - R&D Services, Biotech - Others, Pharma, Medical Technology and Digital Health companies. **Companies founded in 2022 were excluded** since newly founded companies often remain under the radar until their first financing round. Information displayed in the chart may alter as new information is received continuously.

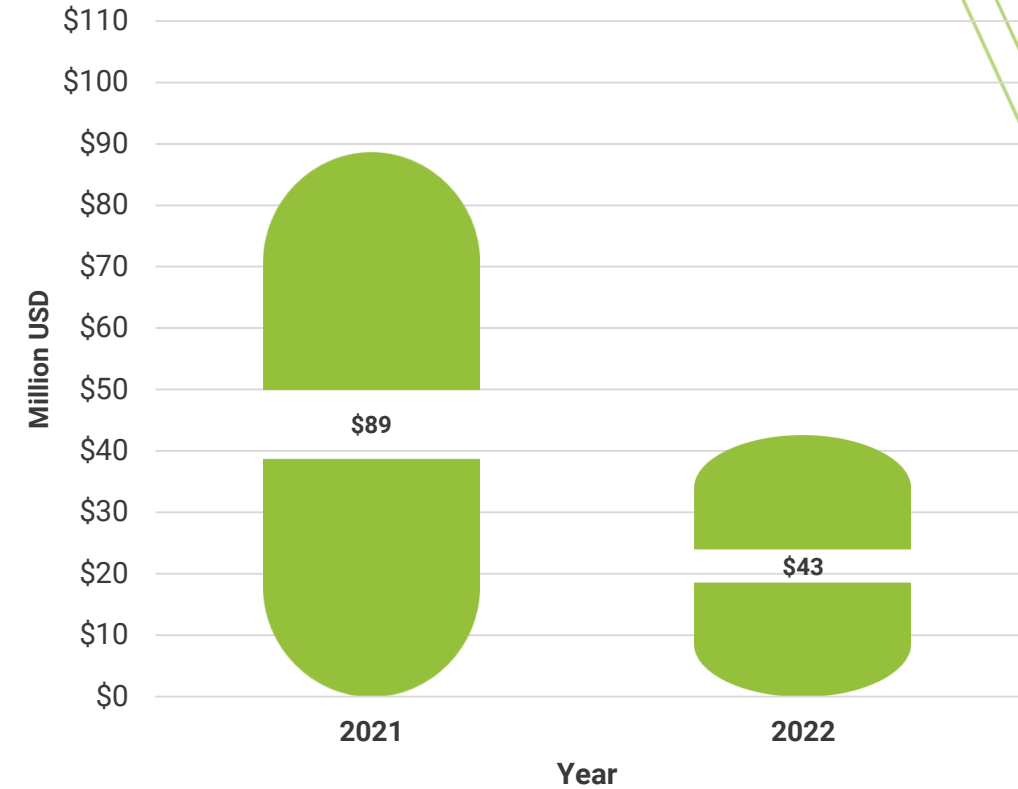
VENTURE FINANCING OF LIFE SCIENCE COMPANIES

PRIVATE EQUITY ROUNDS | 2021-2022

LIFE SCIENCE COMPANIES



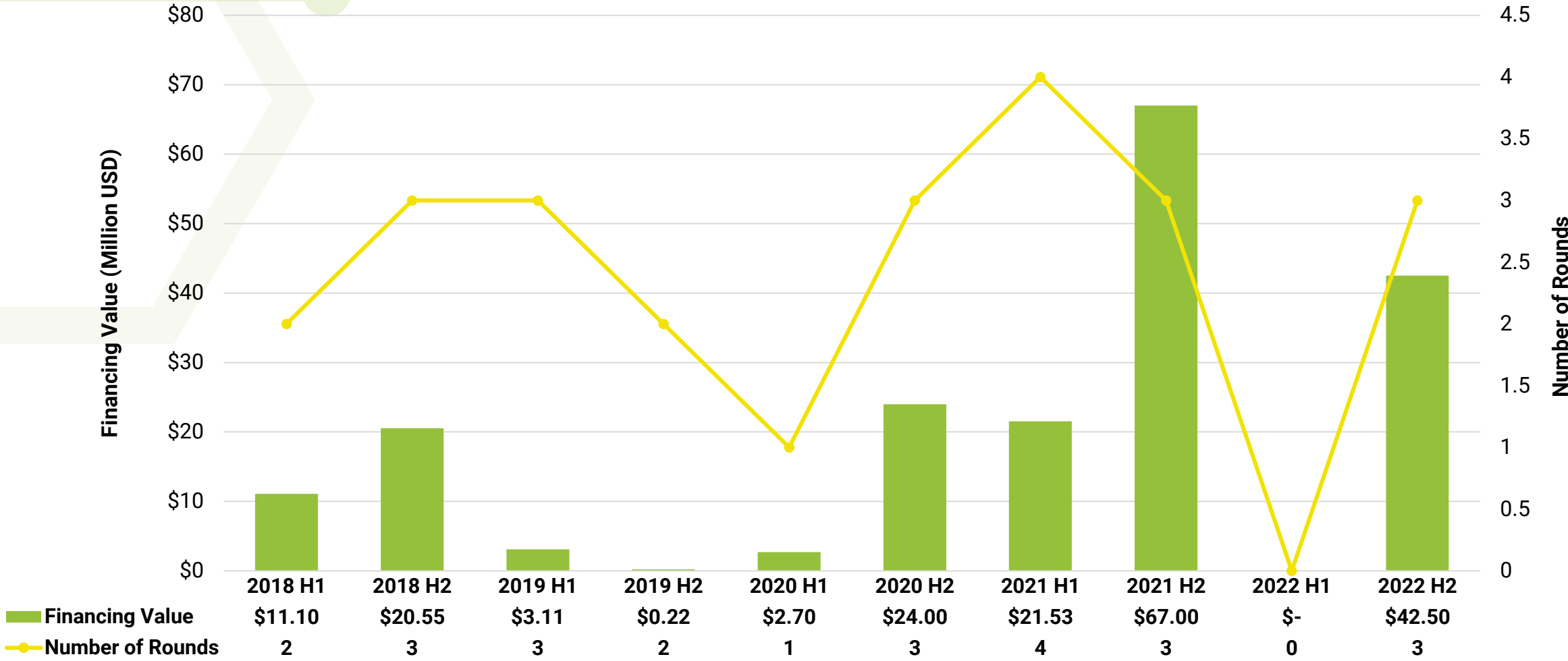
BIOTECH COMPANIES



Life Science companies include Biotech - Therapeutics and Diagnostics, Biotech - R&D Services, Biotech - Others, Pharma, Medical Technology and Digital Health companies. Biotech companies are a subset of Life Science companies and include: Biotech - Therapeutics and Diagnostics, Biotech - R&D Services, Biotech - Others. Financing data only includes private equity rounds (excl. private placements in public companies). Data may alter as new information is continuously received and/or new tranches to existing financing rounds are added.

BIOTECH VENTURE FINANCING

PRIVATE EQUITY ROUNDS – 5 YEAR REPORT



Biotech companies are a subset of Life Science companies and include: Biotech - Therapeutic and Diagnostic, Biotech - R&D Services, Biotech - Others. Financing data only includes private equity rounds (excl. private placements in public companies) of biotech companies (incl. therapeutic and diagnostic, R&D services and others). Data may alter as new information is continuously received and/or new tranches to existing financing rounds are added.

BIOTECH IPOs

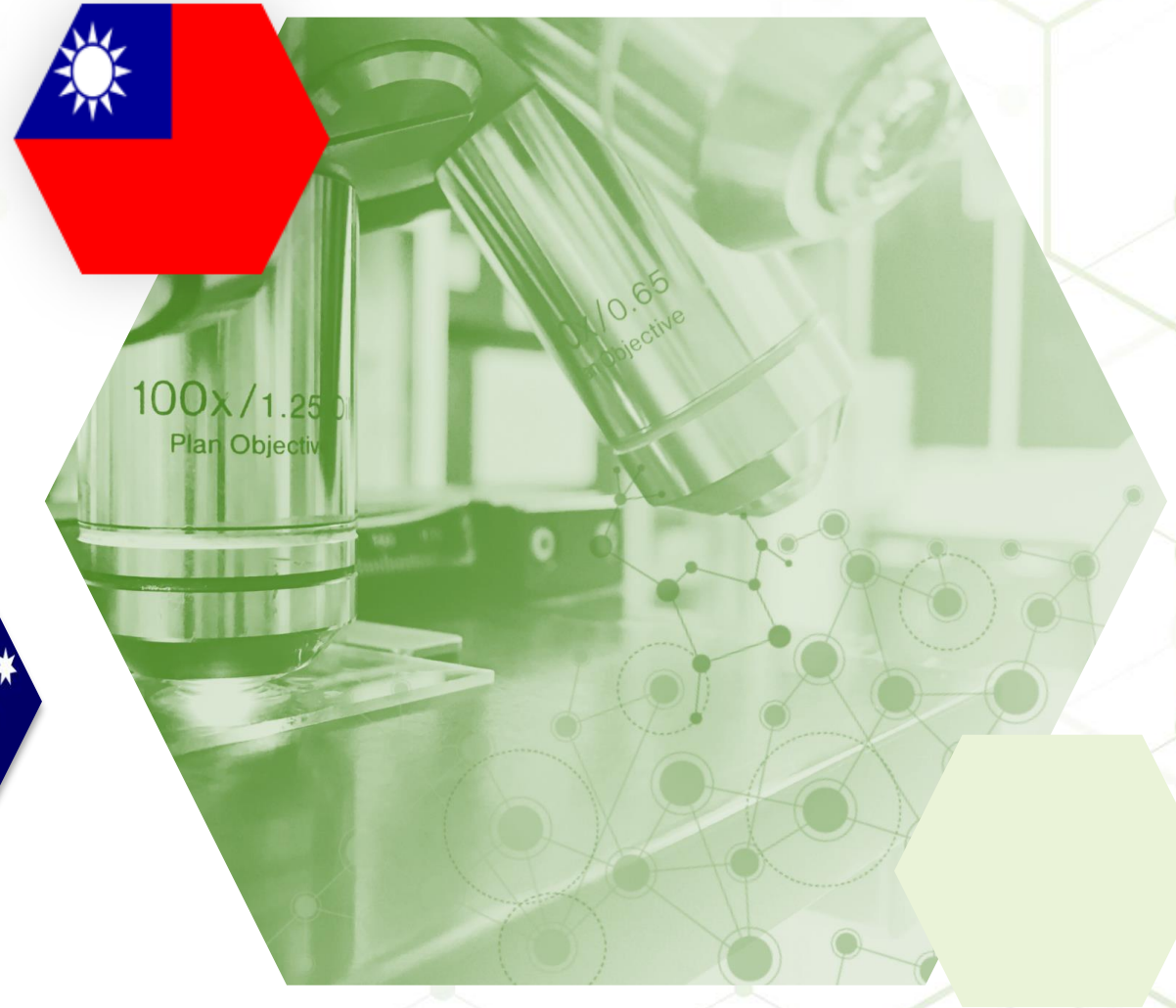
NUMBER OF BIOTECH COMPANIES THAT WENT PUBLIC | 2008-2022



Included are Biotech – Therapeutics and Diagnostics, Biotech – R&D Services, and Other Biotech companies.

COMPARISON BETWEEN TAIWAN AND APAC COUNTRIES

TAIWAN | JAPAN | SOUTH KOREA |
THAILAND | AUSTRALIA



MAJOR BIOTECH VENTURE FINANCING ROUNDS (2022)

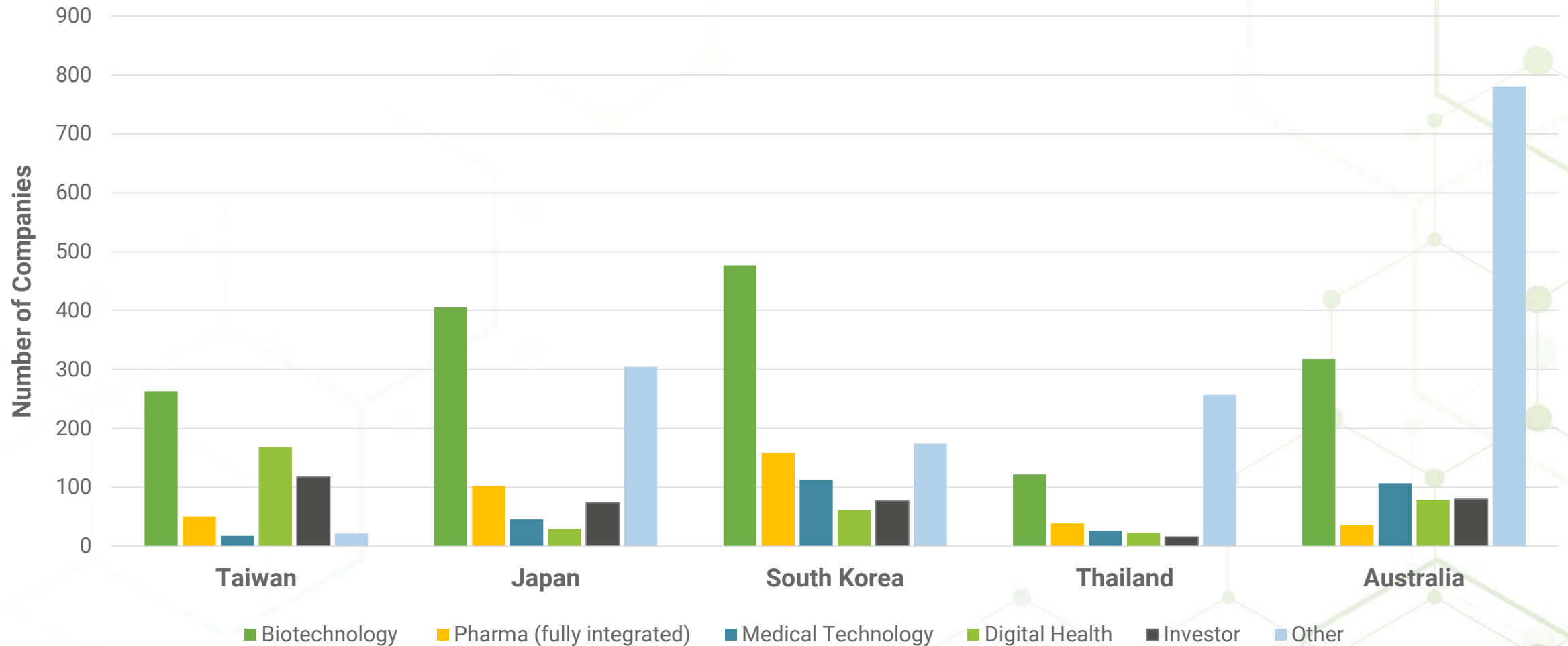
TOP PRIVATE EQUITY FINANCING ROUNDS | 2022

Company	Sector	Type of Round	USD M	Country
Biorchestra	Biotech – Therapeutics	Series C	\$45	South Korea
Organoid Science Co., Ltd.	Biotech – Therapeutics	Series B	\$35	South Korea
LUCA Science Inc.	Biotech – Therapeutics	Series B	\$30.3	Japan
SELECXINE INC CO., LTD	Biotech – Therapeutics	Series B	\$27	South Korea
Aculys Pharma, LLC	Biotech – Therapeutics	Series B	\$24	Japan
Vaxxas Pty. Ltd.	Biotech – Therapeutics	Series C	\$23	Australia
Aston Sci. Co., Ltd.	Biotech – Therapeutics	Series C	\$22.7	South Korea
UPPthera Inc	Biotech – Therapeutics	Series B	\$22.4	South Korea
Modulus Discovery, Inc.	Biotech – Therapeutics	Series C	\$20.4	Japan
BRIM Biotechnology, Inc.	Biotech – Therapeutics	Series E	\$20	Taiwan

The table shows the five biggest private equity financing rounds (excl. IPOs, research grants, loans) of private and independent biotech [or biotech therapeutics and diagnostics] companies in 2022. Information displayed in the table may alter as new information is continuously received and/or new tranches to existing financing rounds are added.

OVERVIEW OF LIFE SCIENCE COMPANIES

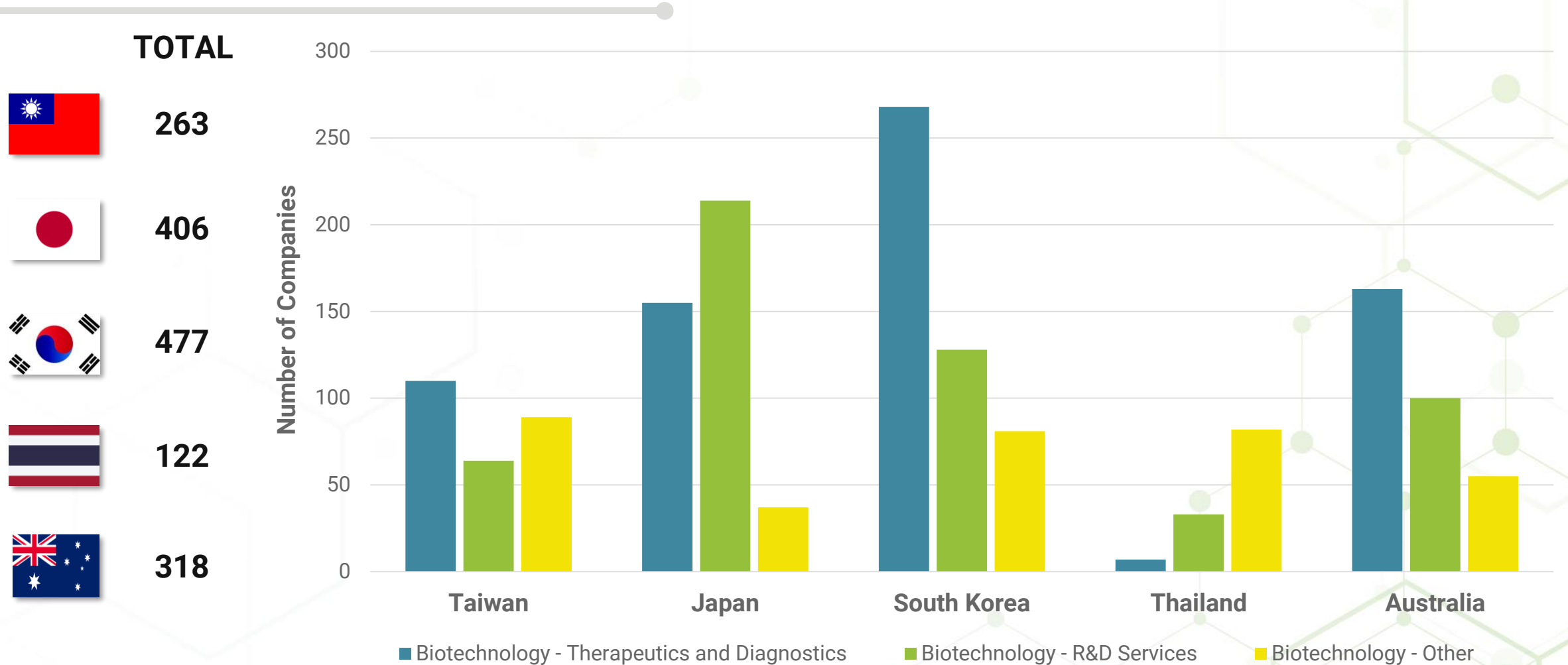
NUMBER OF COMPANIES BY COUNTRY AND SECTOR



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OVERVIEW OF BIOTECH COMPANIES

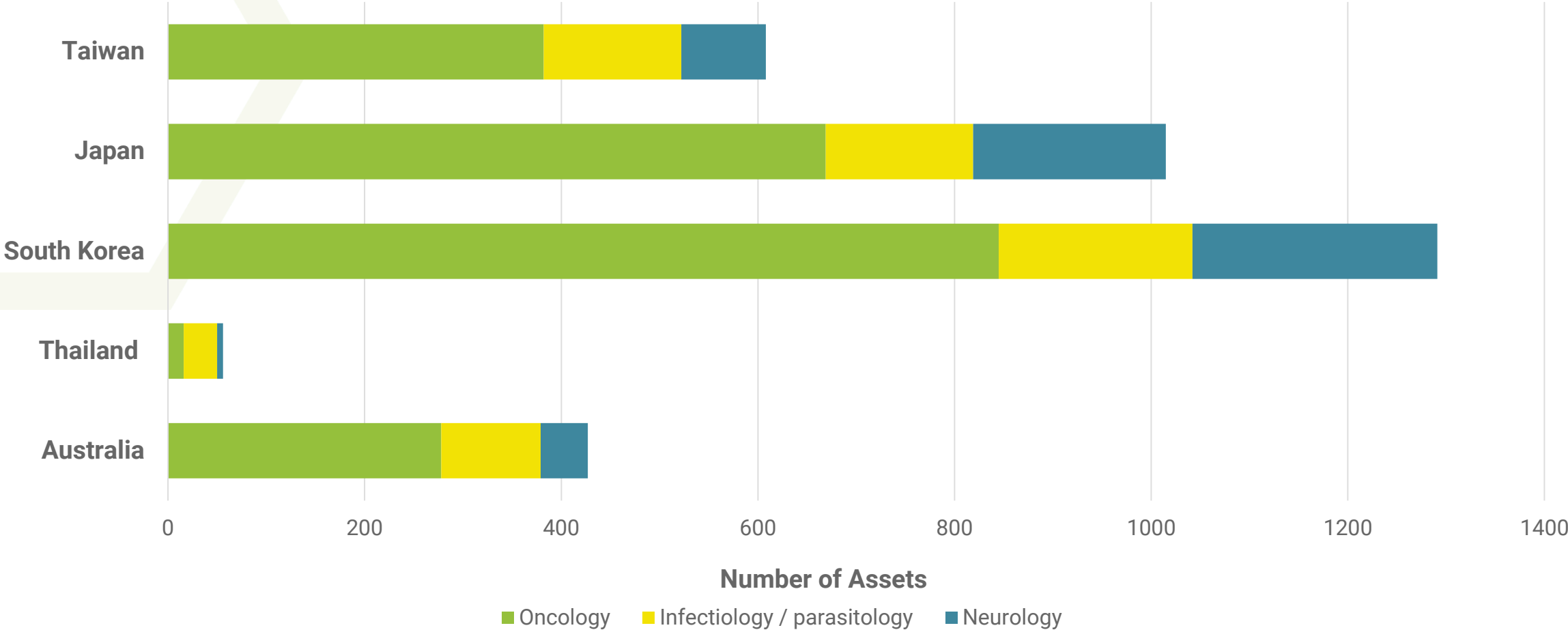
NUMBER OF COMPANIES BY COUNTRY AND SECTOR



For the definition of categories please visit www.biotechgate.com/web/cms/index.php/covered_industry_sectors.html. Biotech Therapeutics category equals to Biotech Therapeutics and Diagnostics. Percentage value is expressed as % of total number of biotechnology companies including Biotech - Therapeutics and Diagnostics, Biotech - R&D Services and Biotech - Others. Information displayed may alter as new information is received continuously.

BIOTECH ASSETS IN CLINICAL DEVELOPMENT

BREAKDOWN BY TOP THREE INDICATIONS



The graph contains the number of assets of Biotech – Therapeutics and Diagnostics companies (excl. of Pharma or Biotech – Others or Biotech – R&D Services companies). The top three indications shown are Oncology, Infectiology/parasitology, and Neurology.

THERAPEUTICS BY DEVELOPMENT PHASE

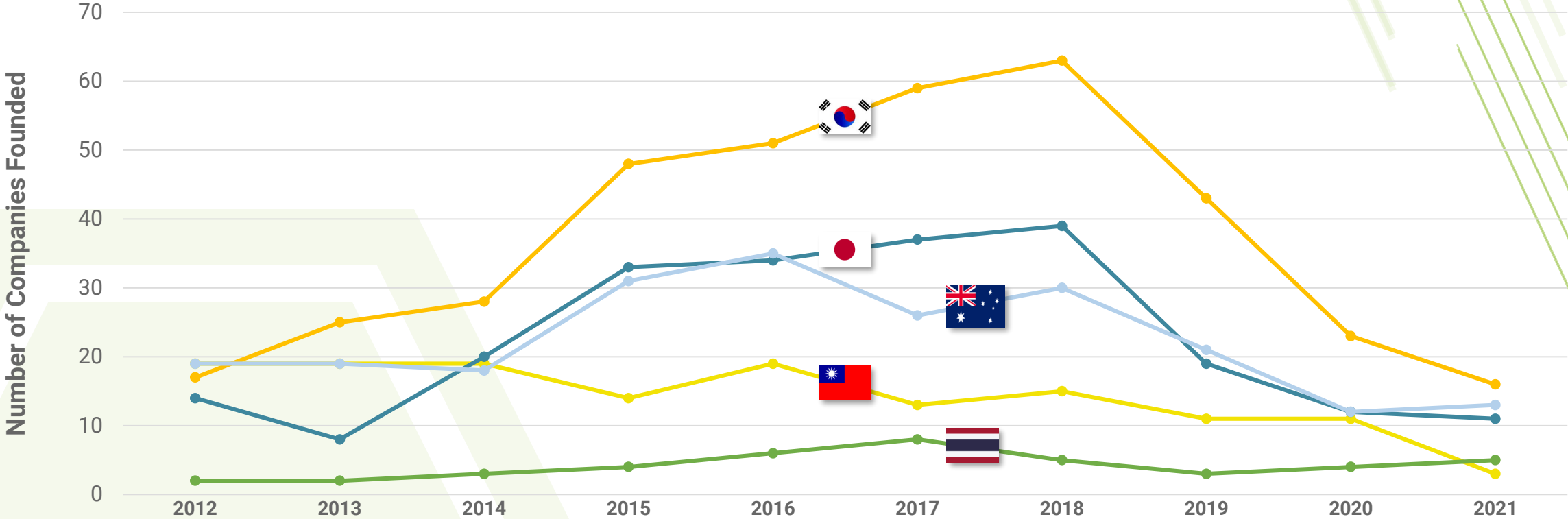
PRECLINICAL AND PHASE I



The graph contains the number of assets of Biotech – Therapeutics and Diagnostics companies (excl. of Pharma or Biotech – Others or Biotech R&D Services companies). Products in Discovery and Lead Optimization Phase are merged into Preclinical. Information displayed in the chart may alter as new information is received continuously.

COMPANY FOUNDATION TIMELINE

NUMBER OF LIFE SCIENCE COMPANIES FOUNDED BY YEAR | 2012-2021

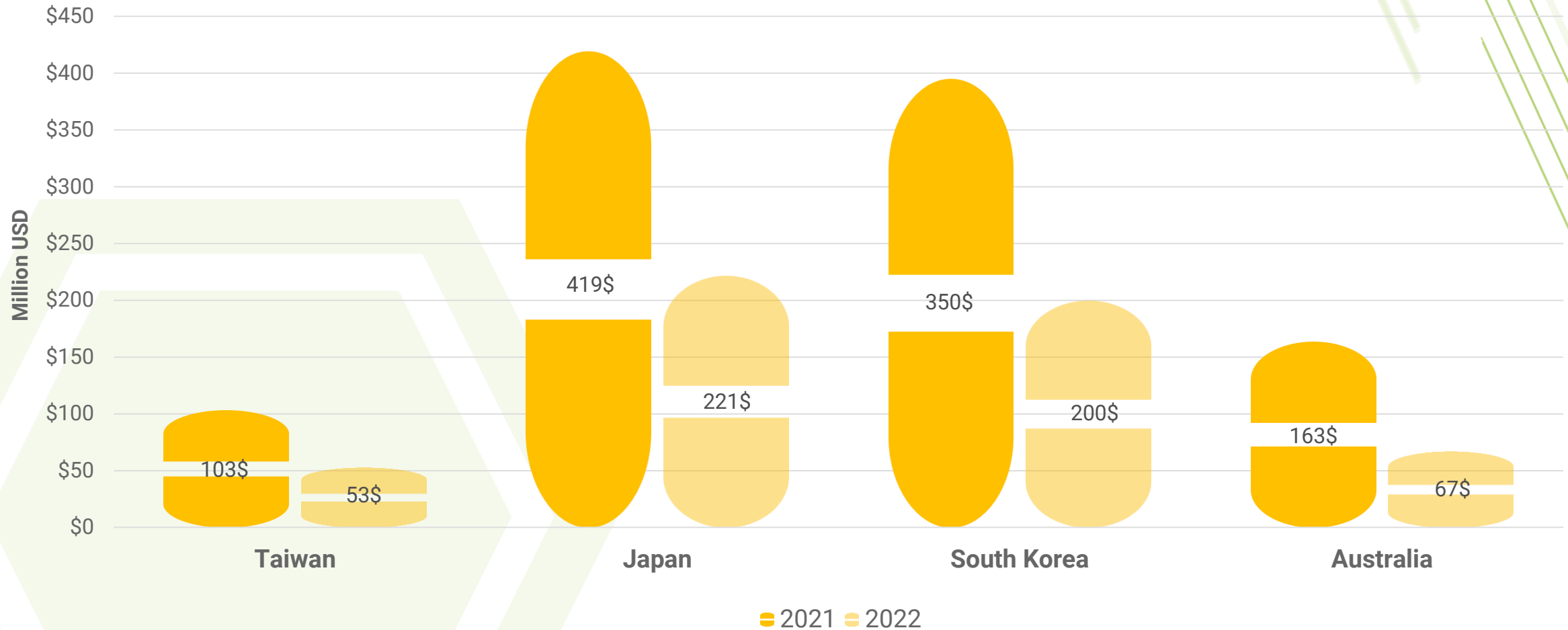


	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Taiwan	19	19	19	14	19	13	15	11	11	3
Japan	14	8	20	33	34	37	39	19	12	11
South Korea	17	25	28	48	51	59	63	43	23	16
Thailand	2	2	3	4	6	8	5	3	4	5
Australia	19	19	18	31	35	26	30	21	12	13

The graph contains the number of privately owned or publicly listed (no subsidiaries) life science companies founded by year including Biotech - Therapeutic and Diagnostic, Biotech - R&D Services, Biotech - Others, Pharma, Medical Technology and Digital Health companies. **Companies founded in 2022 were excluded** since newly founded companies often remain under the radar until their first financing round. Information displayed in the chart may alter as new information is received continuously.

VENTURE FINANCING OF LIFE SCIENCE COMPANIES

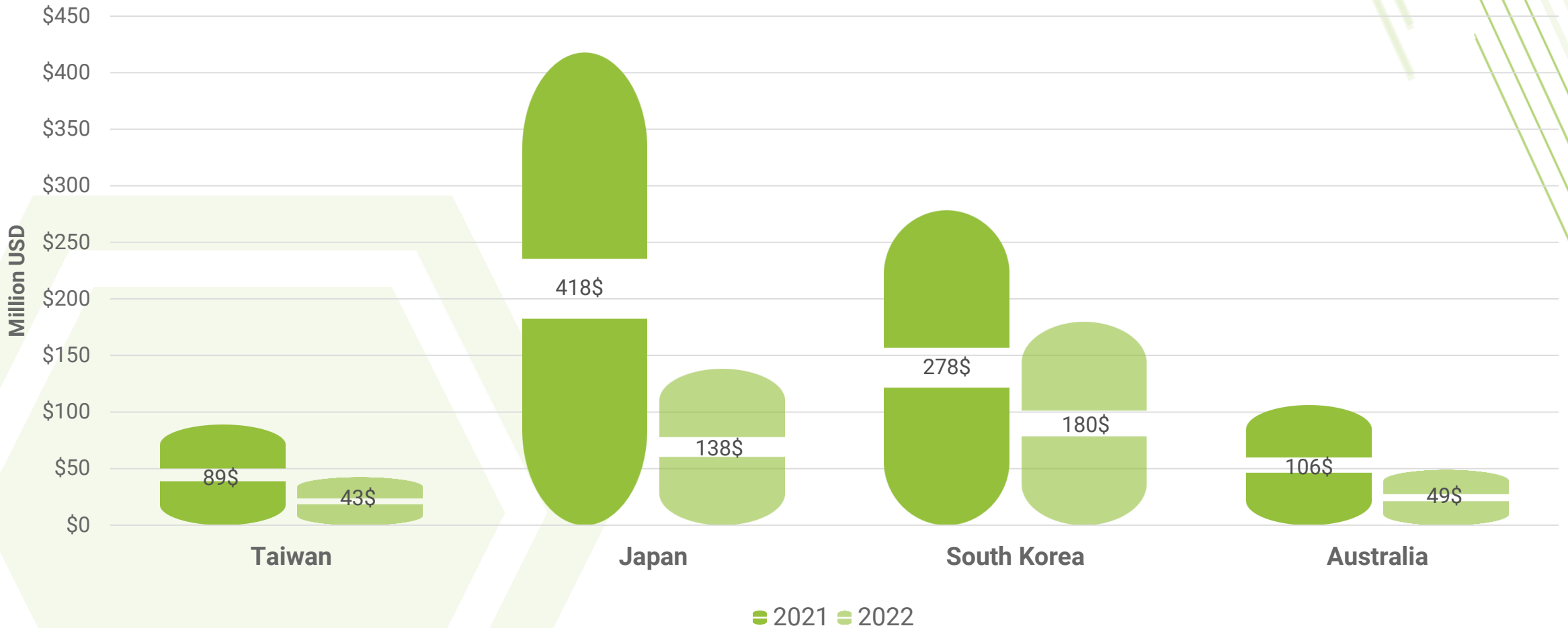
PRIVATE EQUITY ROUNDS OF LIFE SCIENCE COMPANIES | 2021-2022



Life Science companies include Biotech - Therapeutics and Diagnostics, Biotech - R&D Services, Biotech - Others, Pharma, Medical Technology and Digital Health companies. Financing data only includes private equity rounds (excl. private placements in public companies). Thailand is omitted as there was no significant financing round found in the time frame. Data may alter as new information is continuously received and/or new tranches to existing financing rounds are added.

VENTURE FINANCING OF BIOTECH COMPANIES

PRIVATE EQUITY ROUNDS OF BIOTECH COMPANIES | 2021-2022



Biotech companies are a subset of Life Science companies and include: Biotech - Therapeutics and Diagnostics, Biotech - R&D Services, Biotech - Others. Financing data only includes private equity rounds (excl. private placements in public companies). Thailand is omitted as there was no significant financing round found in the time frame. Data may alter as new information is continuously received and/or new tranches to existing financing rounds are added.

ABOUT BIOTECHGATE



Biotechgate is a leading **business development and licensing database** for the entire life science industry, offering a wealth of information on over 65,000 life science company profiles. Thanks to its unique data sourcing process, the profiles include company descriptions, contact information, product pipeline information, financing rounds, and management details, making it an invaluable resource for big pharma, start-ups, investors, and other industry professionals. Biotechgate also features 25,000 **licensing deals** and a **clinical trials database** containing over 750,000 records from registries around the world.

To register for a free trial access or to learn more about the different subscription options, please visit www.biotechgate.com.

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