

Cell Therapies in Healthcare Landscape Overview Q2 2021 (Stem Cells and CAR-Ts)

May 2021



Classification of Cell Therapy Companies by Industry Focus

Pharma
21,5%

Health care
46%

Biotechnology
92,8%

Medical
35,5%

Biotechnology - 370
Health care - 180
Medical - 140
Pharma - 90
Manufacturing, Device - 50
Biopharma - 30

Manufacturing,
Device 12,3 %

Biopharma
8%



DEEP
PHARMA
INTELLIGENCE

Cell Therapies in Healthcare Landscape Overview Q2 2021 (Stem Cells and CAR-T)

Companies - 400
Investors - 200
Corporations - 15

Asia

EU

UK

Other Regions

Companies

Investors

Corporations



DEEP
PHARMA
INTELLIGENCE



Application of Cell Therapies in Pharma R&D and Medicine (Stem Cells and CAR-Ts)

Gene Therapies

Stem Cell Products

Companies

Corporations

CAR-T Therapy

Cell Therapies

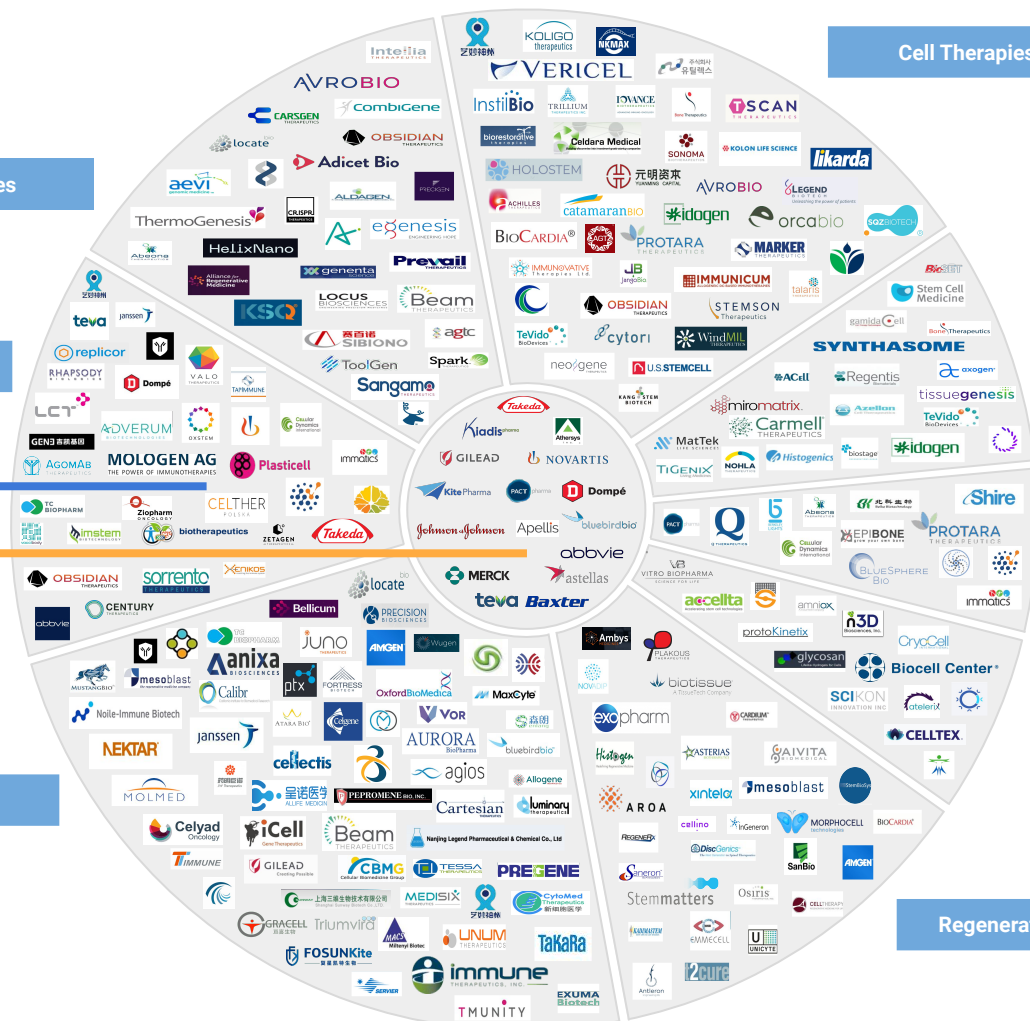
Companies - 400

Tissue Reconstruction

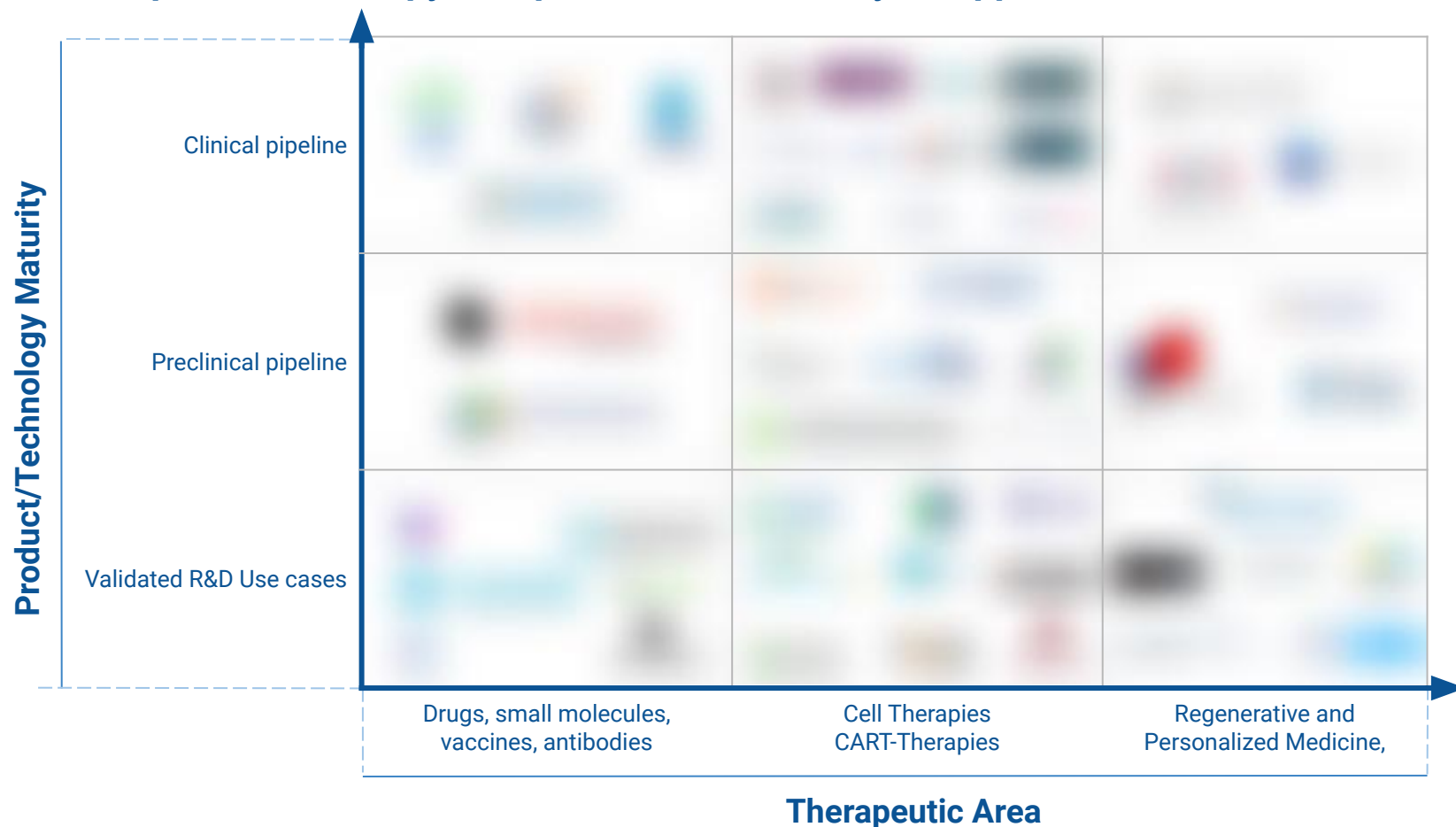
Personalised Medicine

Storage/Cultivation

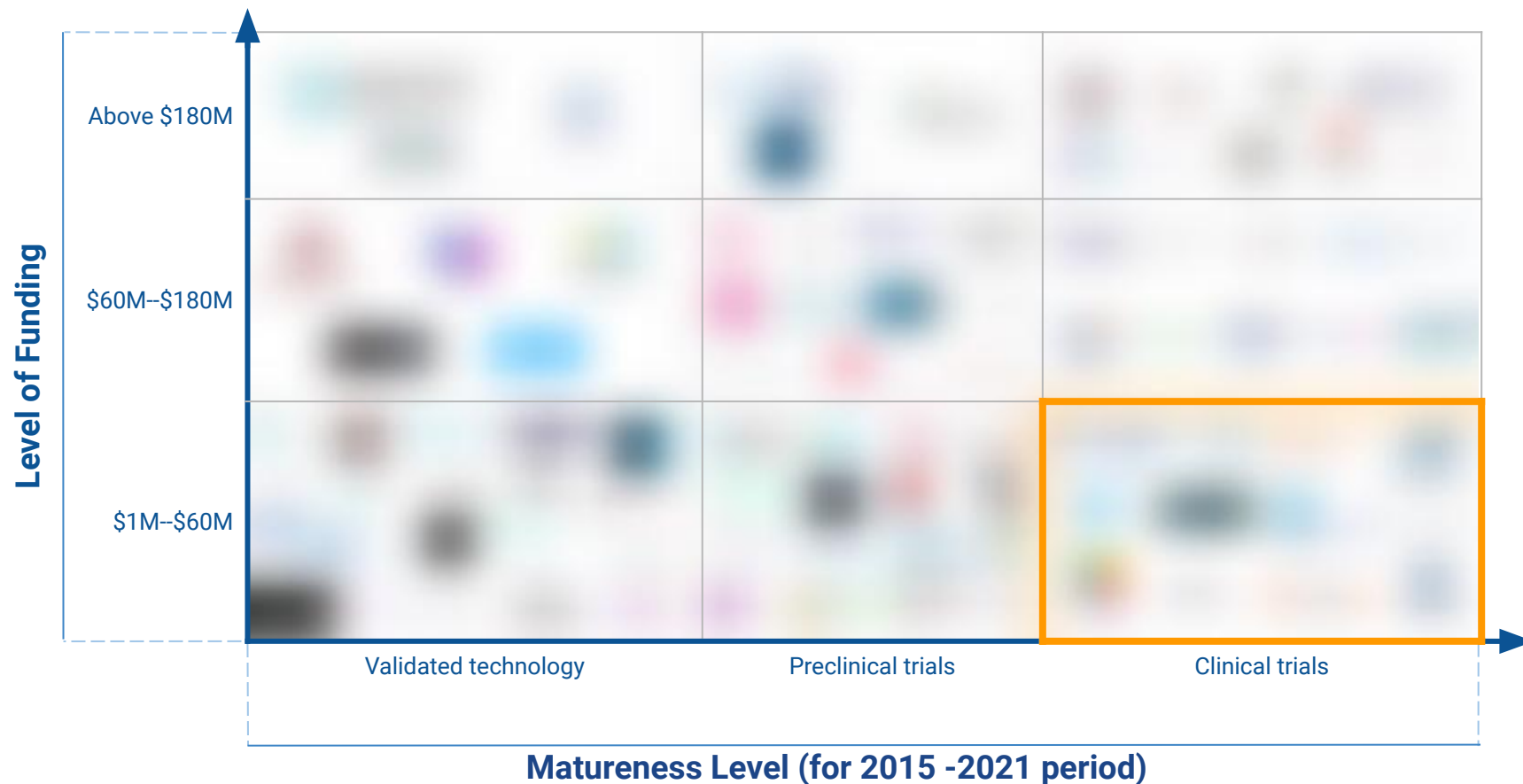
Regenerative Medicine



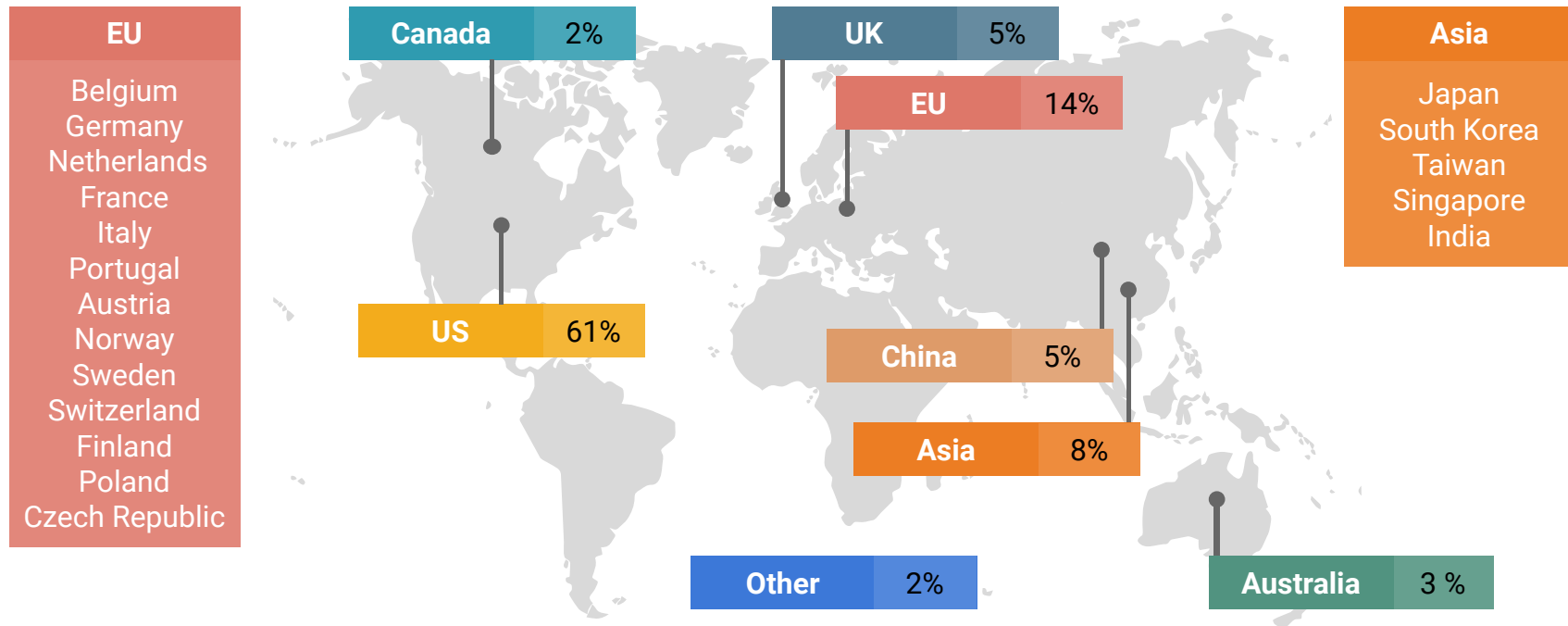
Analysis of Top 50 Cell Therapy Companies: R&D Maturity vs Application Focus



Comparison of Top 50 Cell Therapy Companies: R&D Maturity vs Funding Level



Cell Therapy Companies: Regional Proportion



The US is still in the lead in terms of its proportion of cell therapy companies. Interestingly, Asia Pacific region currently has almost the same proportion of cell therapy companies as Europe. However, Asia-Pacific region has begun to aggressively increase its activity in the space in terms of investments into foreign companies (largely US-based companies), and we expect to see an increase in the number of cell therapy companies located in the Asia-Pacific region generally, and in China particularly.

Clinical Trials Involving iPSCs by Disease Category in 2020

Non-communicable Diseases

- Otolaryngologic Diseases;
- Hematologic Disorders;
- Immune System Disorders;
- Reproductive & Urogenital Disorders;
- Genetic Syndromes;
- Metabolic Disorders.

Other Conditions

- Mental Disorders;
- Neoplasms;
- Diabetes & Kidney Diseases;
- Chronic Respiratory Diseases;
- Digestive Diseases;
- Musculoskeletal Disorders;
- Skin & Subcutaneous Disorders.

Substance use

5,7%

Neurological

12,1%

Cardiovascular

13,6%

Non-communicable

20,7%

Ophthalmic

22,9%

Other

25,0%

Total Number of Clinical Trials: 130

Source: [Nature. Npj Regenerative Medicine](#)

Application of Cell Therapies (Stem Cells and CAR-T) in Pharma R&D and Medicine

CAR-T Therapies



Cell/Cellular Therapies



Gene Therapies/Editing



Application of Cell Therapies (Stem Cells and CAR-T) in Pharma R&D and Medicine

Drug Discovery



Personalized Medicine



Cell Cultivation and Storage



Regenerative Medicine



Organ/Tissue Repairing



Stem Cell Therapies: Outlook

Product Outlook
Adult Stem Cells
Neuronal
Hematopoietic
Mesenchymal
Umbilical
Dental
Adipose-derived
Dedifferentiated fat cells (DFAT)
Human Embryonic Cells
Induced Pluripotent Stem Cells
Very Small Embryonic Like Stem Cells
Perinatal Stem Cells
Other Product Types

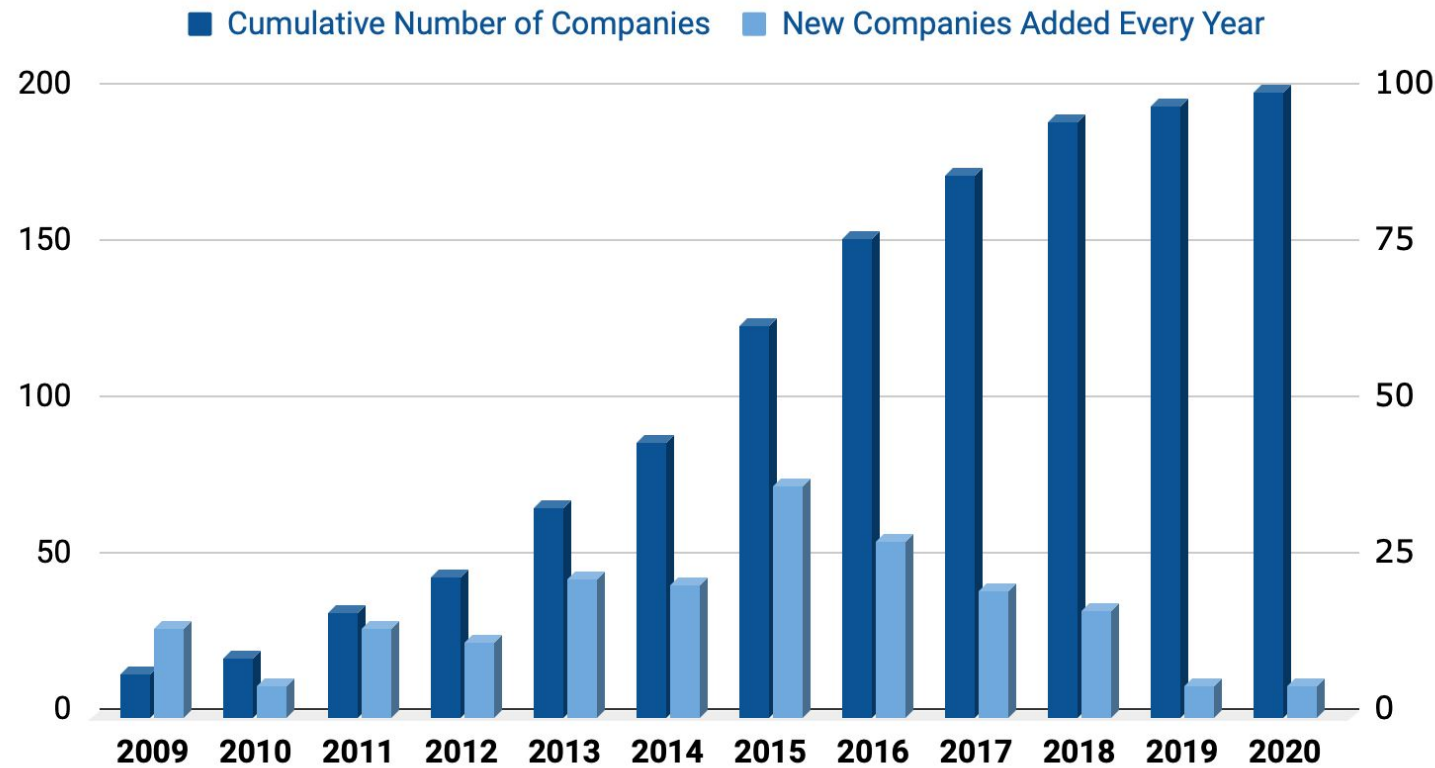
Regional Outlook
North America
Europe
Asia Pacific
Latin America
Middle East & Africa
Australia
Therapy Outlook
Allogeneic Stem Cells
Autologic Stem Cells
Syngeneic Stem Cells

Technology Outlook
Cell Production
Therapeutic Cloning
In-vitro Fertilization
Cell culture
Isolation
Cell Acquisition
Bone Marrow Harvest
Umbilical Blood Cell
Apheresis
Cryopreservation
Expansion and Sub-Culture

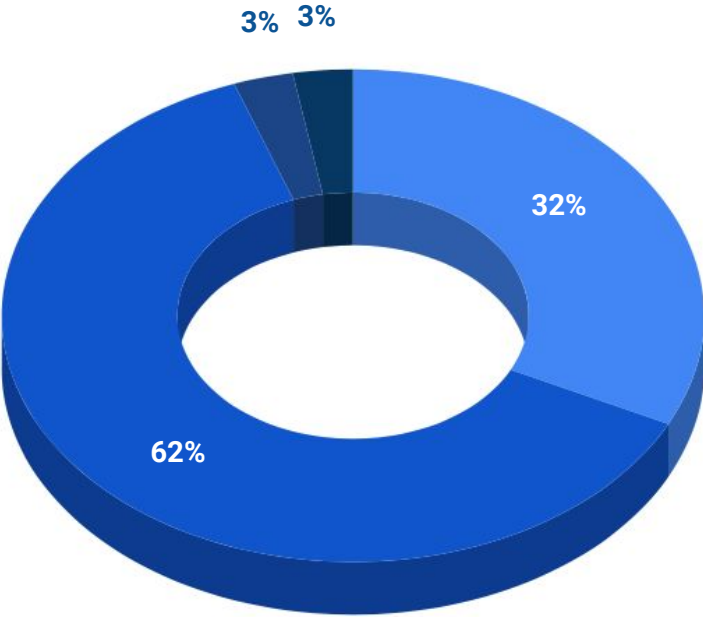
Application Outlook
Regenerative medicine
Neurology
Orthopedics
Oncology
Hematology
Cardiovascular
Injures
Diabetes
Liver disorder
Drug discovery and Development



Growths of Cell Therapy Industry by Number of Companies



Public Vs Private Cell Therapy Companies



- Public Companies – 130
- Private Companies – 250

- Delisted Companies – 10
- No Information – 10

5 Notable Public Companies



ExoCoBio



Allogene Therapeutics



Fate Therapeutics



bluebird bio



Neon Therapeutics

5 Notable Private Companies



BioNTech



CARsgen Therapeutics



Tmunity Therapeutics

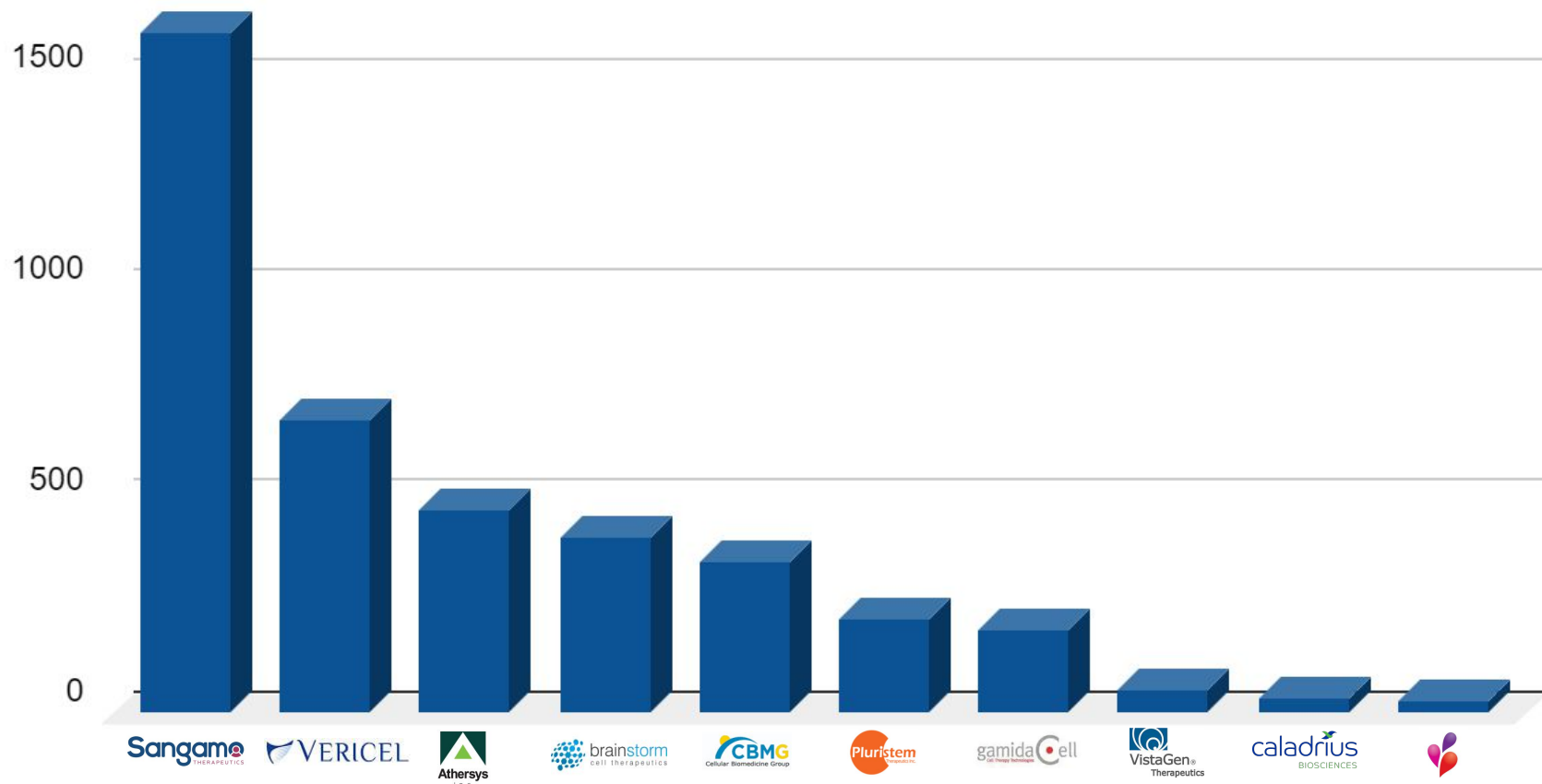


eGenesis

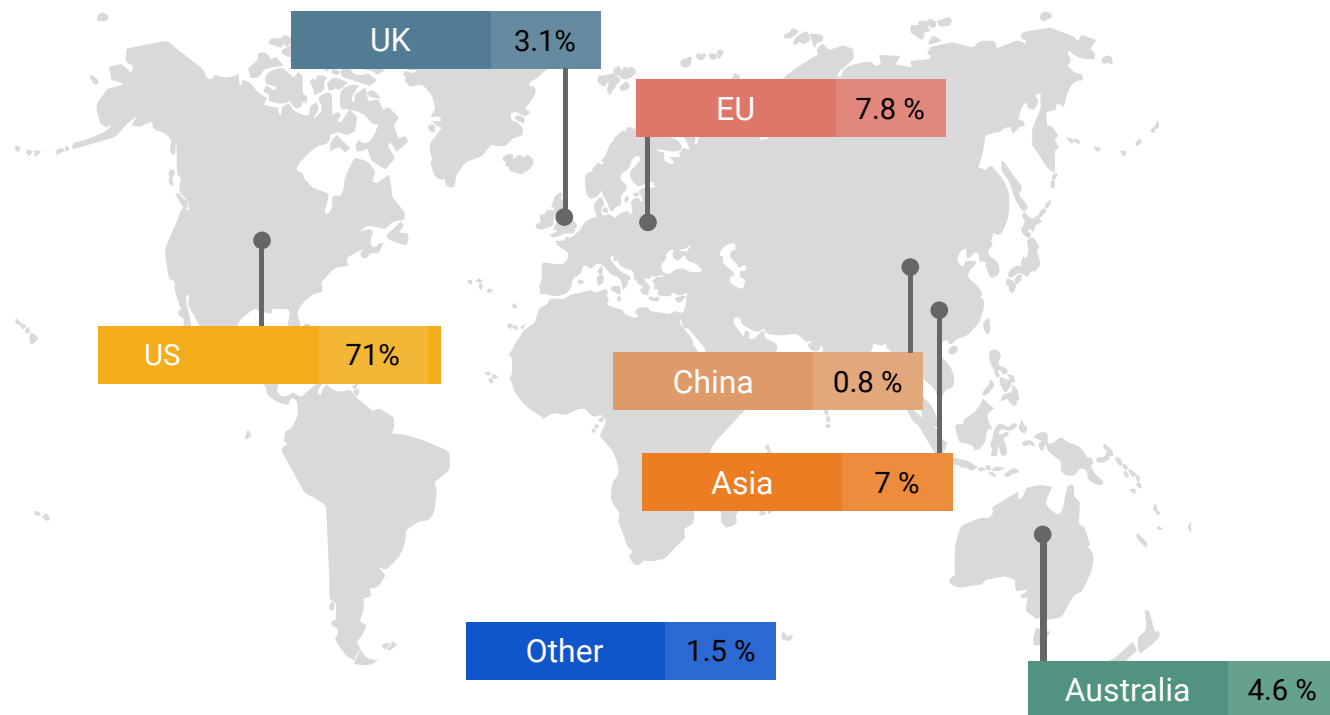


Obsidian Therapeutics

Market Cap of Public Cell Therapy Companies in Million US\$ (NASDAQ)

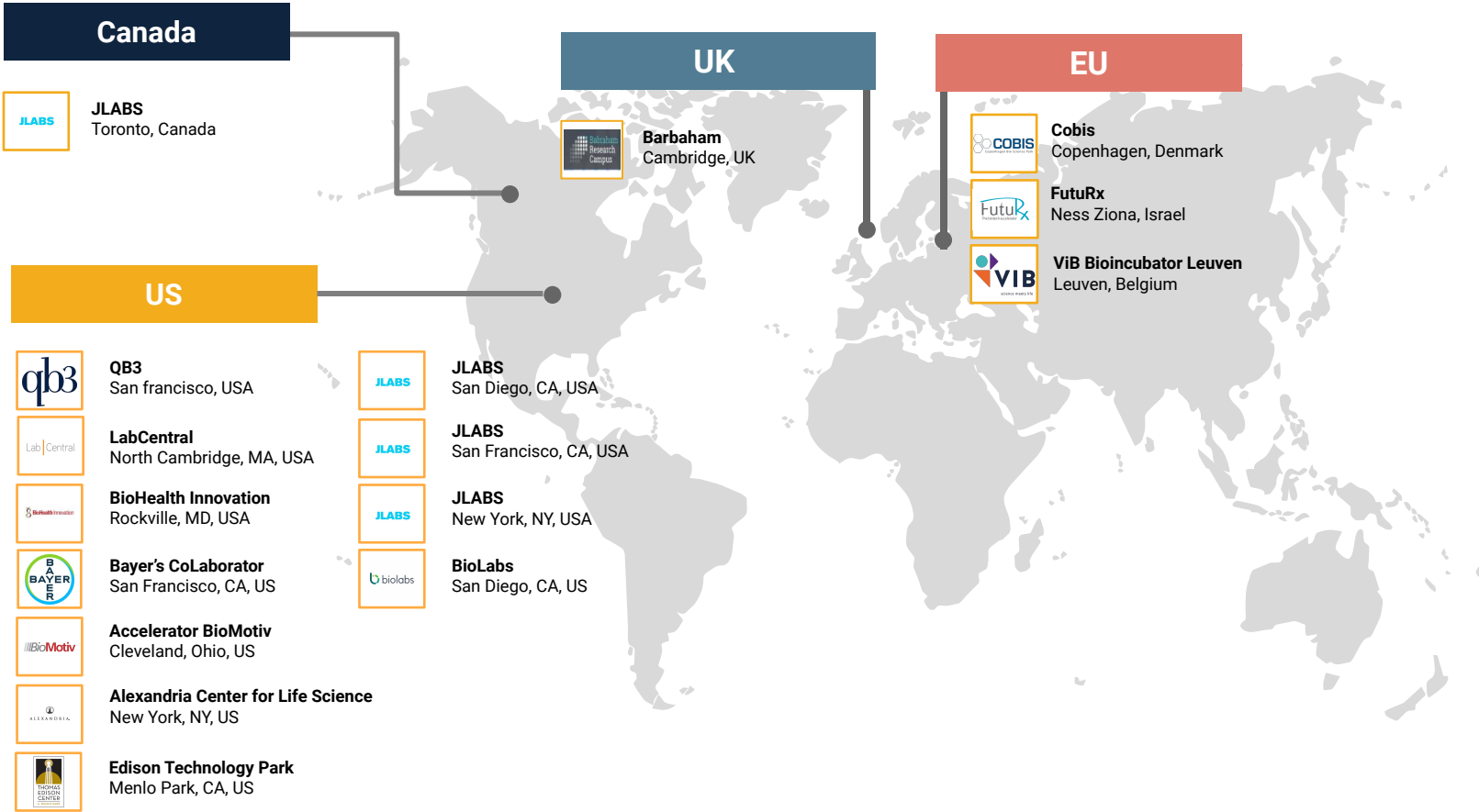


Public Cell Therapy Companies: Regional proportion

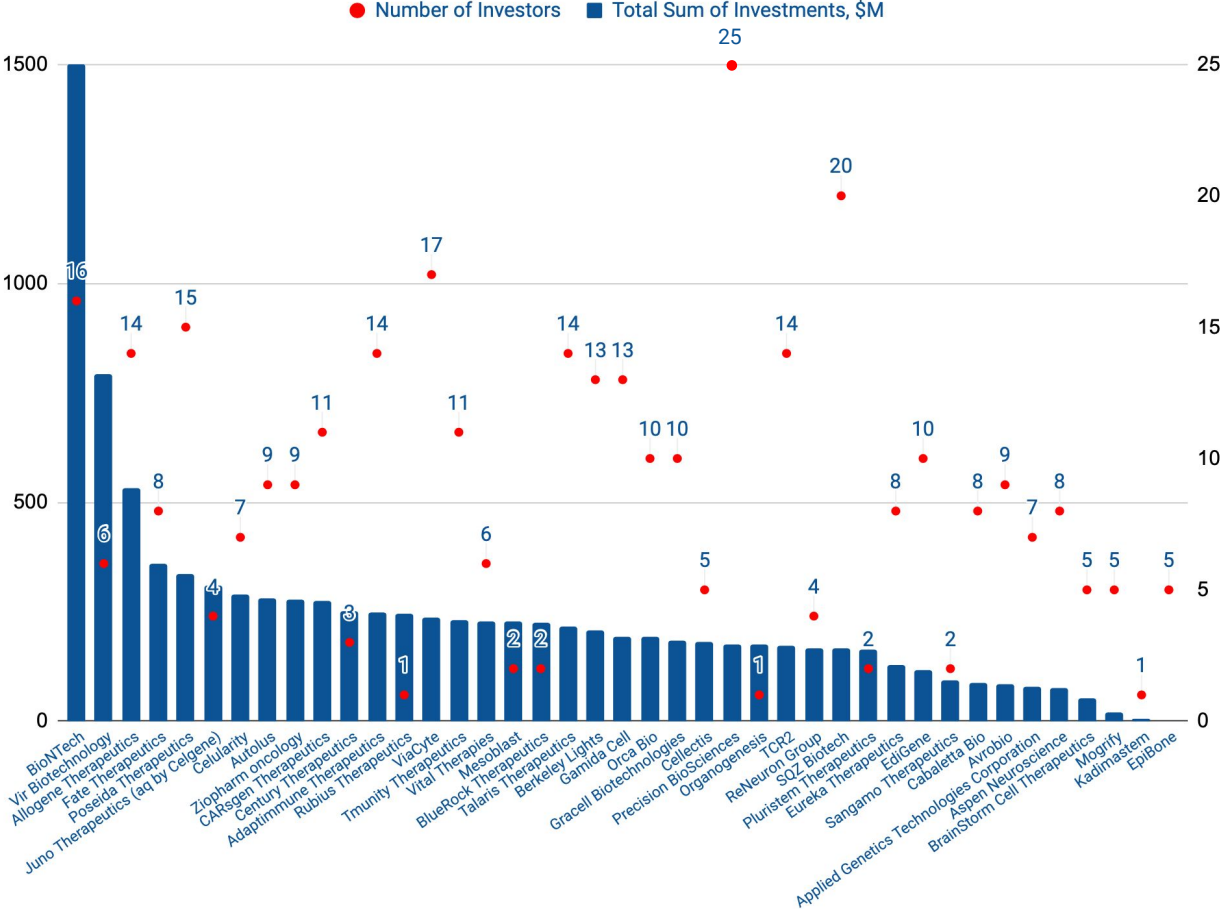


The US is still in the lead in investments in its proportion of cell therapy companies. Interestingly, Asia Pacific region also had 15% of investments into cell therapy companies. However, Asia-Pacific region has begun to aggressively increase its activity in the space in terms of investments into foreign companies (largely US-based companies),

Bioincubators: Regional proportion

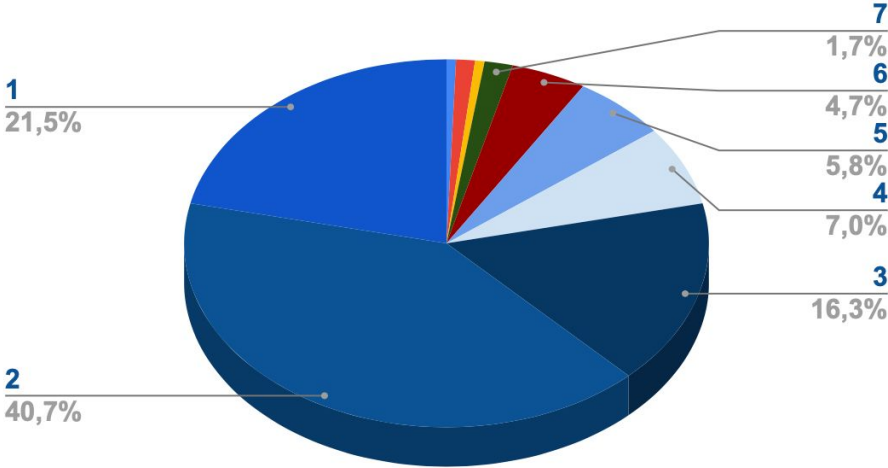


50 Cell Therapy Companies by Total Sum of Investments & Number of Investors



Investments Deals in Cell Therapy Industry

Investors by Number of Deals with Cell Therapy Companies



The Most Active Investors in Cell Therapy Area



ARCH Venture Partners
13 Deals



RA Capital Management
9 Deals



New Enterprise Associates
9 Deals



Lilly Asia Ventures
8 Deals



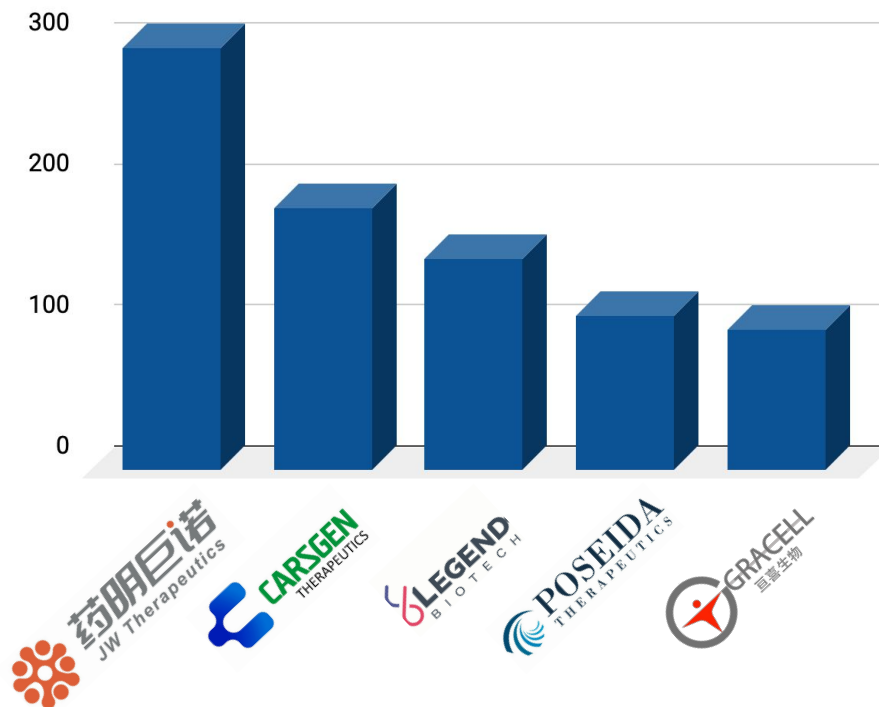
Redmile Group
7 Deals

Investment Landscape at a Glance (2020 – 2021)

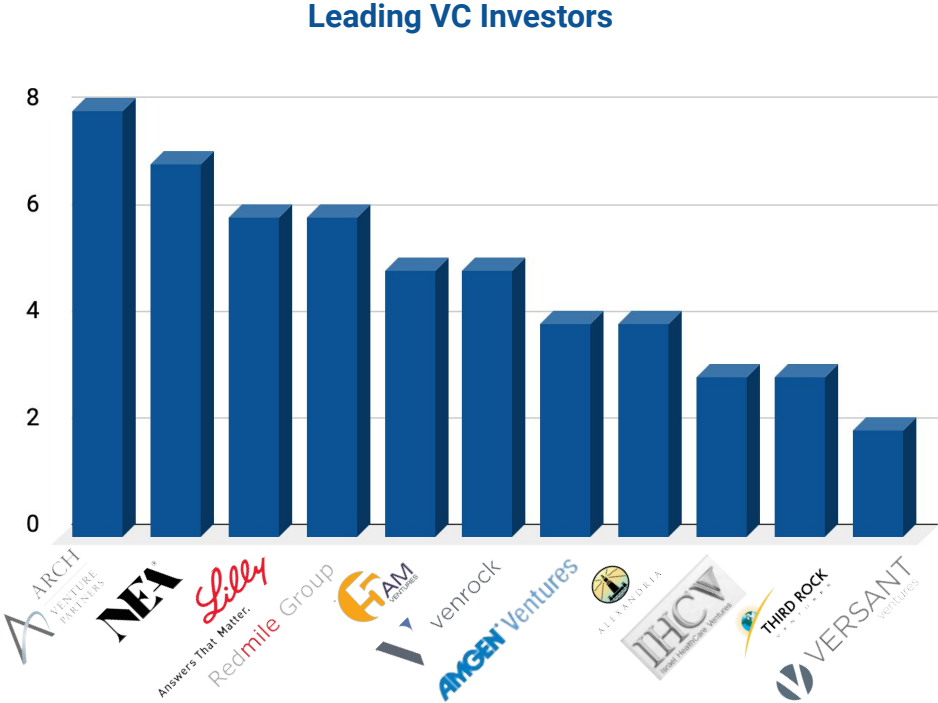
Some of the major deals included:

- **JW Therapeutics** raised **\$300 million** on IPO in Hong Kong Stock Exchange, bringing new CAR-T immunotechnology to China.
- **CARsgen Therapeutics** pulled off **\$180 million** in Series C investment round. The company attracted 5 investors, with a lead investor Loyal Valley Capital.
- **Legend Biotech** received a funding of **\$150 million** over one Series A round in April 2020. Following that, Legend Biotech went on IPO in June 2020.
- **Poseida Therapeutics** has raised a total of **\$110 million** during Series D round in June 2020.
- **Gracell Biotechnologies** attracted 7 investors in Series C funding with a total investment of **\$100 million**.

Notable Investment Deals in 2020 (in million US\$)

















Top 10 Leading Investors by Number of Cell Therapy Deals



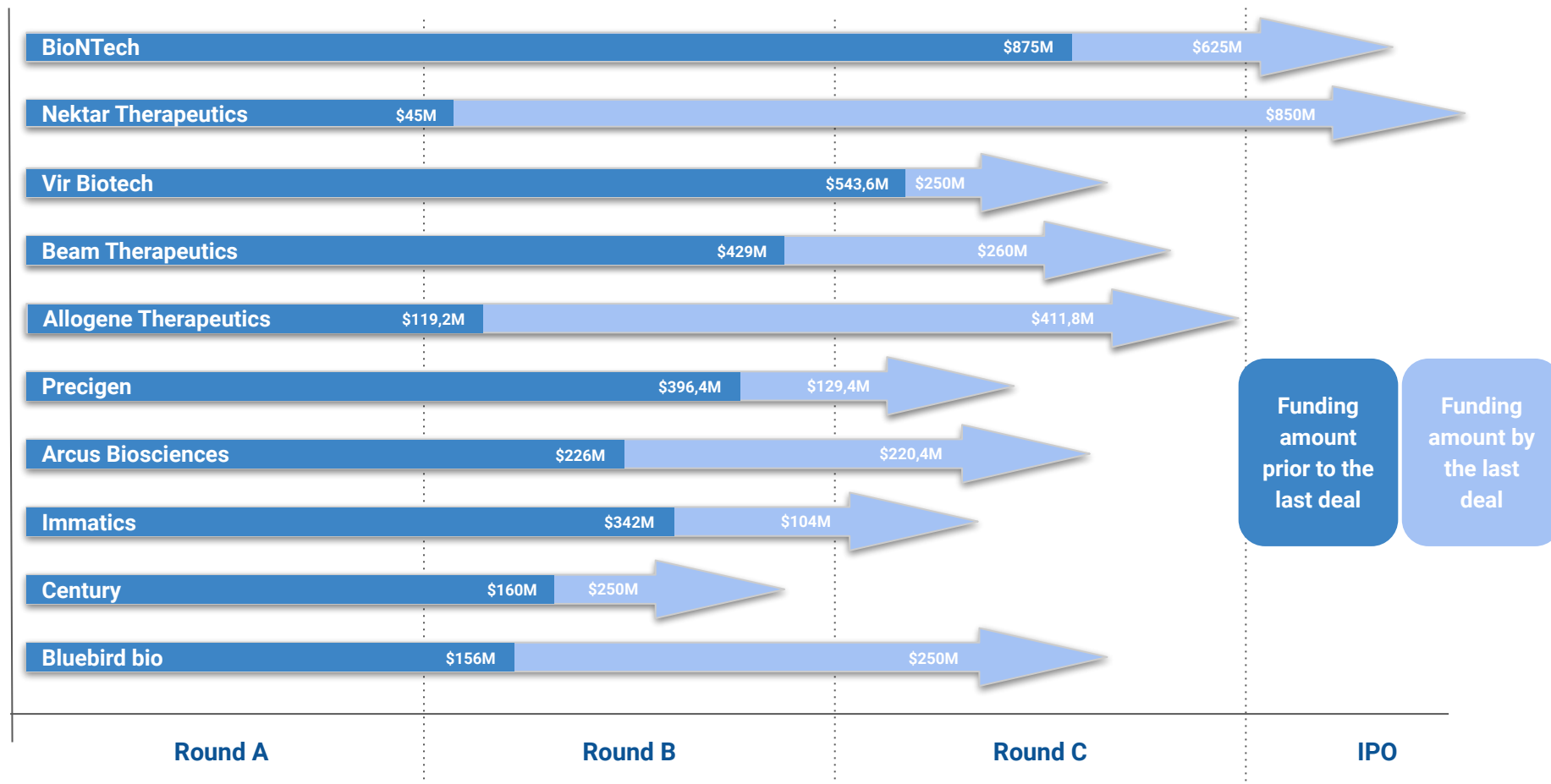
Top 20 Venture Investors in Cell Therapy Industry

Cell Therapy Companies	Investors	Investors	Cell Therapy Companies
      			  
      			  
   			  
     			 
     			 
    			 
   			
   			
  			
   			

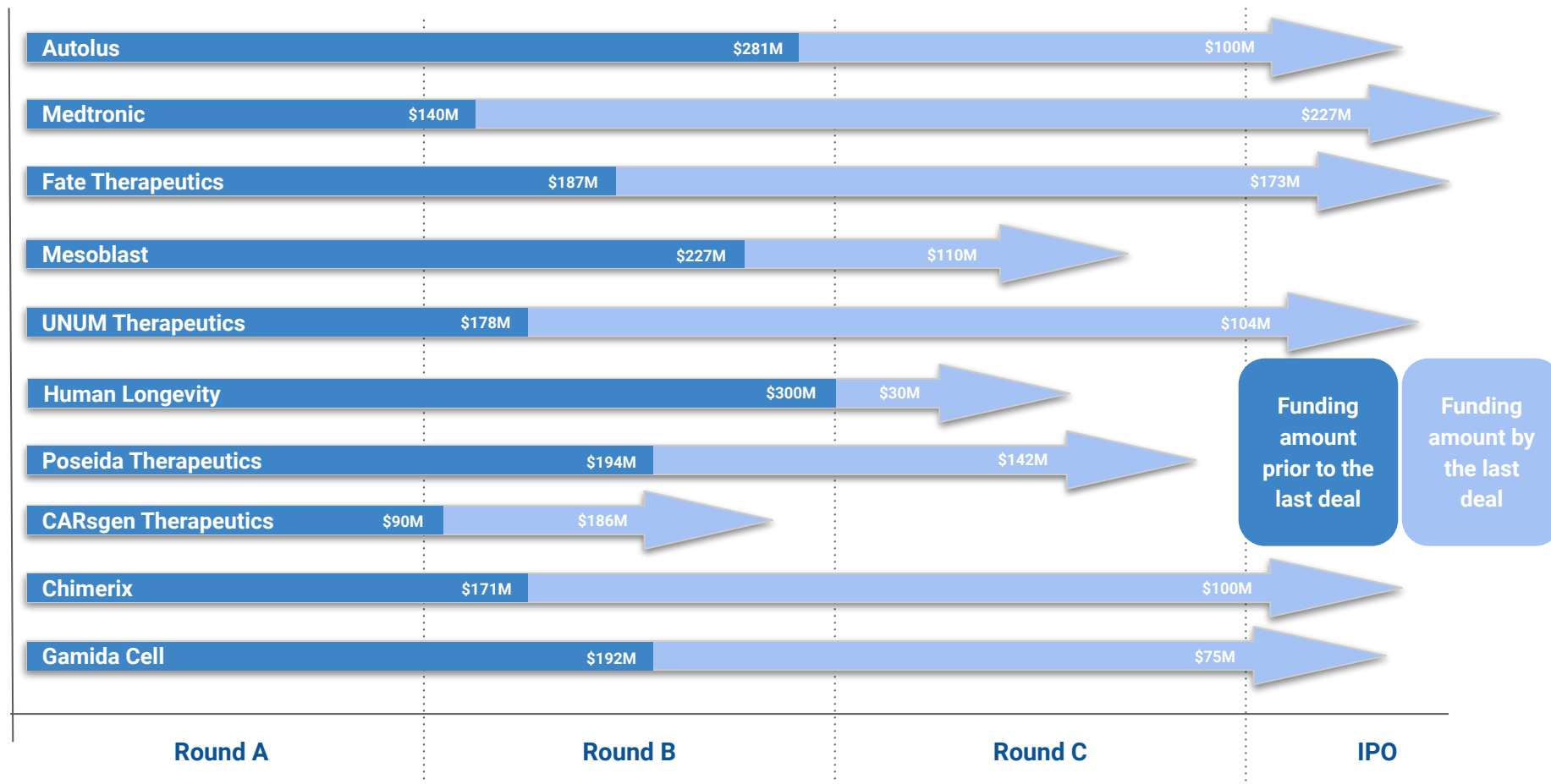
Top 20 Strategic Investors in Cell Therapy Industry

Pharma Companies Investors	Cell Therapy Companies				
					
					
					
					
					
					
					
					
					
					

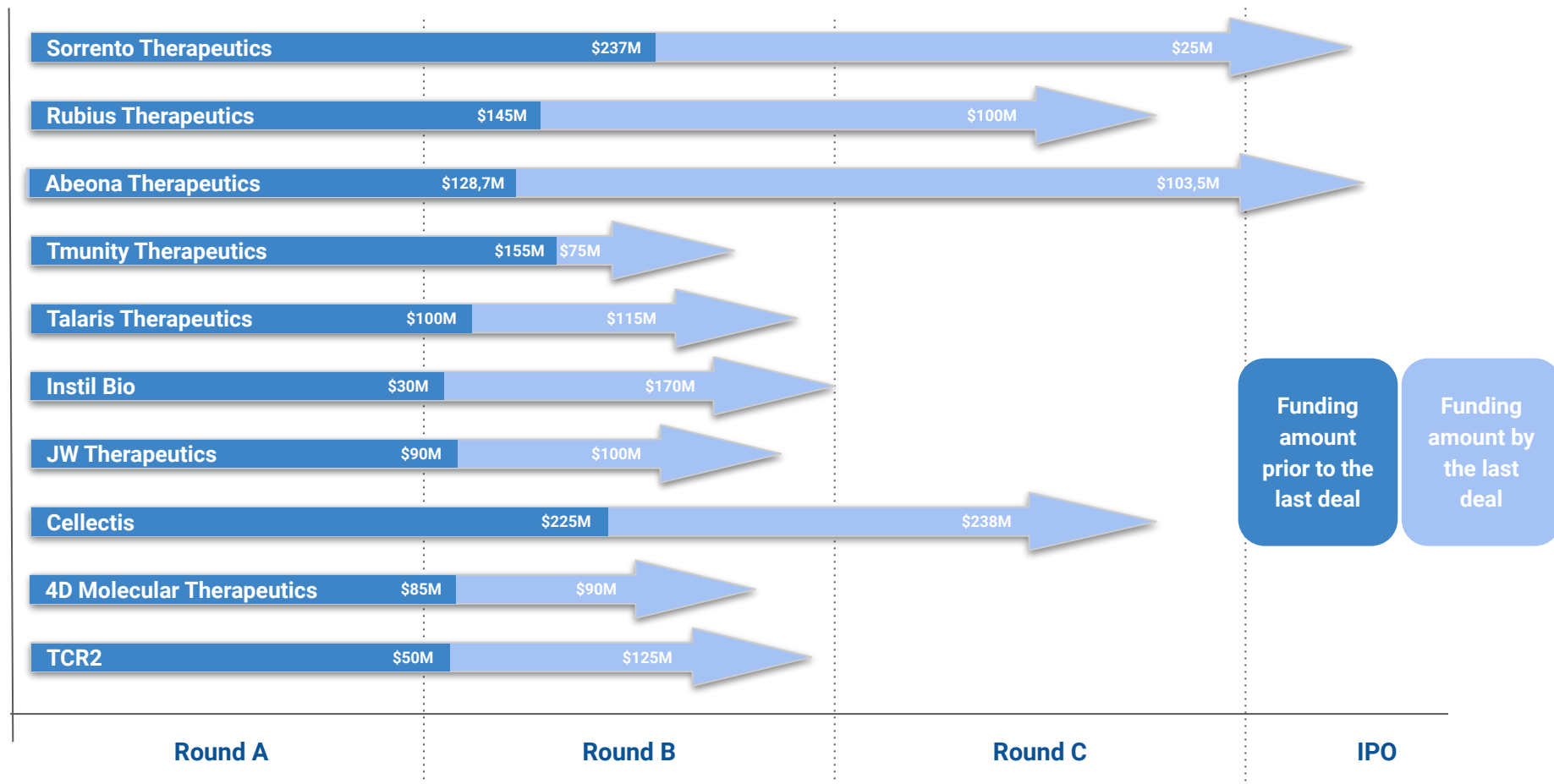
Leading Companies by Amount and Stage of Funding



Leading Companies by Amount and Stage of Funding






























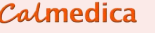




















Leading Companies by Amount and Stage of Funding



Investments Deals in Cell Therapy Industry

Number of Investors	Cell Therapy Companies
10	                
9	     
8	    
7	   
6	     
5	      
4	      
3	   
2	         
1	         








Investments of Cell Therapy Companies in Cell Therapy Industry

Investors	Cell Therapy Parental Companies	Number of Deals	Cell Therapy Companies (Related Companies, Joint Ventures)
		7	 GRACELL 旦靈生物
		6	 Adicet Bio
 NIH National Institute on Drug Abuse	 astellas	3	 Intellia THERAPEUTICS
	 上海未名旭拓生物 Shanghai Sinobio Sinochem Biotech	2	 cogent BIOSCIENCES
	 IVA	1	 immatics
	 sorrento THERAPEUTICS	1	 ATARA BIO
 Australian Government	 mesoblast	1	 HUMAN LONGEVITY, INC.
 ARCH VENTURE PARTNERS	 Juno Therapeutics	1	 CRISPR THERAPEUTICS
 illumina VENTURES™	 HUMAN LONGEVITY, INC.	1	 celularity
 Celgene	 bluebird bio	1	 AVROBIO
 GE VENTURES	 Calmedica	1	 be BIOPHARMA
 HERITAGE GROUP	 bluebird bio	1	 EXUMA Biotech
 PONTIFAX			 Triumvira
 Mission Bay Capital			 celularity
 GENOA VENTURES			 Osiris THERAPEUTICS, INC.
 ARCH VENTURE PARTNERS			 药明巨诺 JW Therapeutics
 THIRD ROCK VENTURES			 celularity
 RACapital			 Intellia THERAPEUTICS
 FORBION Capital Partners			 Capricor
 ARCH VENTURE PARTNERS			 TC BIOPHARM



Cell Therapy Investors in US

United States








Menlo Park

	Menlo Ventures Menlo Park, California, US
	Astellas Venture Management Menlo Park, California, US
	5AM Ventures Menlo Park, California, US
	Sofinnova Investments Menlo Park, California, US
	Canaan Partners Menlo Park, California, US
	Kleiner Perkins Menlo Park, California, US
	Khosla Ventures Menlo Park, California, US



Palo Alto

	Venrock Palo Alto, California, US
	Vivo Capital Palo Alto, California, US








San Francisco

	Redmile Group San Francisco, California, US
	Amgen Ventures San Francisco, California, US
	EcoR1 Capital San Francisco, California, US
	Alexandria Venture San Francisco, California, US
	VenBio Partners San Francisco, California, US
	Alta Partners San Francisco, California, US
	CIRM San Francisco, California, US






California

	Thiel Capital Los Angeles, California, US
	Domain Associates San Diego, California, US

Massachusetts

	Atlas Venture Cambridge, Massachusetts, US
	Polaris Partners Boston, Massachusetts, US
	Flagship Pioneering Cambridge, Massachusetts, US
	Third Rock Ventures Boston, Massachusetts, US
	Fidelity Cambridge, Massachusetts, US
	RA Capital Management Boston, Massachusetts, US
	Adage Capital Management Boston, Massachusetts, US

New York

	Cormorant Capital New York, New York, US
	OrbiMed New York, New York, US
	Invus New York, New York, US
	Aisling Capital New York, New York, US
	Casdin Capital New York, New York, US

Illinois

	Deerfield Capital Management Rosamond, Illinois, US
	ARCH Venture Partners Chicago, Illinois, US
	Tactics II Stem Cell Ventures Northbrook, Illinois, US

Cell Therapy Investors in Europe & Asia

Europe

UK


 **Syncona Partners LLP**
London, England, United Kingdom

 **4BIO Capital**
London, England, United Kingdom

 **AlbionVC**
London, England, United Kingdom


 **Arthurian Life Sciences**
London, England, United Kingdom


 **Cancer Research Technology**
London, England, United Kingdom


 **Eight Roads Ventures**
London, England, United Kingdom


 **Innovate UK**
Swindon, Wiltshire, United Kingdom

Germany


 **Bayer**
Leverkusen, Germany

 **Fresenius Medical Care**
Bad Homburg, Hessen, Germany


 **TVM Capital**
Munich, Bayern, Germany

 **Wellington Partners**
Munich, Bayern, Germany

Belgium


 **S.R.I.W.**
Liège, Liege, Belgium

Spain


 **Grifols**
Barcelona, Catalonia, Spain

 **Suma Venture**
Barcelona, Catalonia, Spain

Switzerland


 **Novartis**
Basel, Basel-Stadt, Switzerland


 **HBM Healthcare Investments**
Zug, Zug, Switzerland

 **Nextech Invest**
Zurich, Zurich, Switzerland

Asia


Japan


 **Kyoto-iCAP**
Kyoto, Kyoto, Japan

 **Mitsubishi UFJ Capital**
Tokyo, Japan

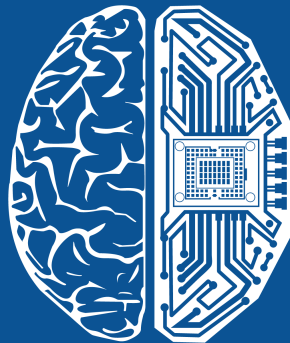
China

 **IDG Capital**
Beijing, China

 **Sequoia Capital**
Beijing, China

 **Morningside Group**
Shanghai, China

 **Lilly Asia Ventures**
Shanghai, China



Link to the Report: <https://www.deep-pharma.tech/cell-therapies>

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Website: [deep-pharma.tech](https://www.deep-pharma.tech)

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