Global Life Science Financing Update

- September 2023 -



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Overview of Financing Type

Financing Type	Total Amount (\$m)	Percent of Total	# of Deals	Avg. Deal (\$m)
Grant	\$77.3	1.4%	13	\$5.9
Pre Seed	\$0.6	0.0%	1	\$0.6
Seed	\$246.5	4.6%	17	\$14.5
Series A	\$447.0	8.3%	12	\$37.3
Series A2	\$7.0	0.1%	1	\$7.0
Series B	\$967.3	17.9%	15	\$64.5
Series B2	\$70.0	1.3%	2	\$35.0
Series C	\$1,262.5	23.3%	9	\$140.3
Venture Round	\$57.6	1.1%	4	\$14.4
IPO	\$608.0	11.2%	2	\$304.0
P.I.P.E	\$10.5	0.2%	1	\$10.5
Post IPO Debt	\$201.0	3.7%	2	\$100.5
Post IPO Equity	\$902.6	16.7%	7	\$128.9
Private Equity Round	\$210.0	3.9%	1	\$210.0
Undisclosed	\$350.0	6.5%	1	\$350.0
Total	\$5,417.9		88	

Regional Breakdown

Region	Total \$ Raised (\$m)	# of Deals	% of U.S.
Boston	\$1,412.0	16	39.7%
San Francisco	\$873.3	10	24.5%
Los Angeles	\$475.0	3	13.3%
South Carolina	\$350.0	1	9.8%
Seattle	\$169.5	3	4.8%
Texas	\$95.0	2	2.7%
Chicago	\$83.0	2	2.3%
Washington D.C. / Baltimore	\$49.9	6	1.4%
Philadelphia	\$18.0	1	0.5%
Colorado	\$8.7	1	0.2%
New York	\$7.8	3	0.2%
Atlanta	\$7.0	1	0.2%
Kansas City, KA	\$4.0	1	0.1%
RTP	\$3.5	1	0.1%
Miami	\$0.5	1	0.0%
New Orleans	\$1.9	1	0.1%
Total U.S.	\$3,559.1	53	100.0%
% of Total	66%	60%	0.0%

Region	Total \$ Raised (\$m)	# of Deals
Europe - UK	\$330.6	8
Europe	\$278.4	10
Total Europe	\$609.0	18
% of Total	11%	20%
China	\$521.0	5
Asia	\$20.0	1
Total Asia	\$541.0	6
% of Total	10%	7%
Israel	\$155.0	2
% of Total	3%	2%

Technology Breakdown

Modality	Total	% of Total	# of Deals
Biologic	\$1,024.6	18.9%	20
Small Molecule	\$855.3	15.8%	17
Hybrid	\$720.0	13.3%	3
Al	\$583.8	10.8%	6
CDMO	\$575.5	10.6%	3
Radiopharmaceutical	\$533.0	9.8%	2
Diagnostic	\$279.0	5.1%	6
mRna	\$179.0	3.3%	5
Inhalant	\$150.0	2.8%	1
Cell Therapy	\$116.6	2.2%	4
Vaccine	\$115.0	2.1%	1
Medical Device	\$100.0	1.8%	1
Instruments & Tools	\$81.0	1.5%	11
Gene Therapy	\$43.9	0.8%	4
Transdermal Patch	\$23.0	0.4%	1
Device	\$20.0	0.4%	1
Tissue Engineering	\$10.5	0.2%	1
Cannabinoid	\$5.2	0.1%	1
Unknown	\$2.5	0.0%	1
Total	\$5,417.9	100.0%	89

Advanced Therapies Financings							
mRna	\$179.0						
Cell Therapy	\$116.6						
Gene Therapy	\$43.9						
Tissue Engineering	\$10.5						
Total AT	\$350.0						
% of Total	6.5%						

Top 10 Financings by Funds Raised

<u>Date</u>	Company	Investment Cluster	<u>Modality</u>	Investment (\$M)	Round
09-19	RayzeBio	San Diego	Radiopharmaceutical	\$358.00	IPO
09-15	Nephron Pharmaceuticals	South Carolina	CDMO	\$350.00	Undisclosed
09-14	Generate Biomedicines	Boston	Al	\$273.00	Series C
09-11	ImmunityBio	Los Angeles	Hybrid	\$270.00	Post IPO Equity
09-11	CymaBay Therapeutics	San Francisco	Small Molecule	\$258.70	Post IPO Equity
09-22	BridgeBio Pharma	San Francisco	Hybrid	\$250.00	Post IPO Equity
09-15	Neumora	Boston	Biologic	\$250.00	IPO
09-06	Apollo Therapeutics	Europe - UK	Biologic	\$226.50	Series C
09-13	Canton Biologics	China	CDMO	\$223.00	Series C
09-06	Nimbus Therapeutics	Boston	Small Molecule	\$210.00	Private Equity Round

Breakdown of Funding by Rounds

September - Grant Funding

<u>Date</u>	<u>Company</u>	Investment Cluster	<u>Modality</u>	Investment (\$M)	Round	<u>Investors</u>
09-29	Thymmune	Boston	Cell Therapy	\$37.00	Grant	NIH - Advanced Research Projects Agency for Health (ARPA-H)
09-27	Agathos Biologic	Fargo, ND	Instruments & Tools	\$0.30	Grant	State of North Dakota
09-26	Arcturus	Washington D.C. / Baltimore	mRna	\$9.00	Grant	CF Foundation
09-26	Oncolytics Biotech	Canada	Biologic	\$5.00	Grant	Pancreatic Cancer Action Network (PanCAN)
09-26	Theradaptive	Washington D.C. / Baltimore	Biologic	\$7.40	Grant	U.S. Department of Defense (DOD
09-25	Saros Therapeutic	Chicago	Small Molecule	\$2.00	Grant	National Cancer Institute
09-25	Vincere Biosciences	Boston	Small Molecule	\$0.70	Grant	NIH - Phase I SBIR
09-21	South Rampart Pharma	New Orleans	Small Molecule	\$1.90	Grant	NIH STTR
09-20	Hillhurst Biopharmaceuticals	San Diego	Biologic	\$3.00	Grant	Small Business Innovation Research
09-14	Glyphic Biotechnologies	New York	Instruments & Tools	\$0.41	Grant	National Institutes of Health
09-12	Nine Square Therapeutics	New York	Small Molecule	\$4.50	Grant	Michael J. Fox Foundation
09-11	Deverra Therapeutics	Seattle	Cell Therapy	\$3.50	Grant	Washington's Cancer Research Endowment
09-07	Elicio Therapeutics	Boston	Biologic	\$2.60	Grant	Gastro-Intestinal Research Foundation

September - Seed Funding (1/3)

<u>Date</u>	<u>Company</u>	Investment Cluster	<u>Modality</u>	Investment (\$M)	Round	<u>Investors</u>
09-28	100X Bioassay	Boston	Instruments & Tools	\$0.60	Pre Seed	
09-28	Pencil Biosciences	Europe - UK	Gene Therapy	\$6.80	Seed	Octopus Ventures, Northern Gritstone and Martlet Capital, Greater Manchester and Cheshire Life Science Fund managed by Catapult Ventures, UKI2S, Jonathan Milner (Meltwind), o2h Ventures
09-27	Novel Biotechnology	Canada	CDMO	\$2.50	Seed	angel investors, Ontario Center of Innovation (OCI
09-26	SeaBeLife SAS	Europe	Small Molecule	\$1.27	Seed	Breizh Angels, Angels Santé, WeLike, and BAdGE
09-26	Partillion Bioscience	Los Angeles	Instruments & Tools	\$5.00	Seed	+ND Capital, Paladin Capital Group, Vertical Venture Partners
09-21	JURA Bio	Boston	Cell Therapy	\$16.10	Seed	Michael Chambers, John Ballantyne, Fontus Capital, Josh Ellington
09-20	Verlmmune	Washington D.C. / Baltimore	Biologic	\$3.00	Seed	Proxima VC, Gaingels, Mana Ventures and others. In addition to this financing, a milestone payment from Fosun Pharma USA
09-19	Hyku Biosciences	Boston	Small Molecule	\$56.00	Seed	RA Capital Management, Droia Ventures, Novartis Venture Fund, The Mark Foundation for Cancer Research, KB Investment and Eisai Innovation

September - Seed Funding Continued (2/3)

<u>Date</u>	Company	Investment Cluster	<u>Modality</u>	Investment (\$M)	Round	<u>Investors</u>
09-19	BioLoomics	Colorado	Biologic	\$8.70	Seed	Innovation Endeavors, with participation from Horizons Ventures, TechU Ventures, Boom Capital Ventures, Hummingbird Nomads Fund, Cooley GC&H, BoxOne Ventures and Viswa Colluru (Founder of Enveda).
09-19	AIRNA	Boston	mRNA	\$30.00	Seed	ARCH Venture Partners, ND Capital, Fast Track Initiative, Novalis and Codon Capital
09-12	Arialys Therapeutics	San Deigo	Biologic	\$58.00	Seed	Avalon BioVentures, Catalyst Pacific, MPM BioImpact, Johnson & Johnson Innovation – JJDC, Inc. and Alexandria Venture Investments.
09-11	Nomax Therapeutics	Miami	Biologic	\$0.53	Seed	
09-07	BlueWhale Bio	Philadelphia	Instruments & Tools	\$18.00	Seed	Danaher Ventures, Novalis LifeSciences, Marshall Wace , Hillhouse Capital
09-07	Noetik	San Francisco	Al	\$14.00	Seed	DCVC (Lead), Zetta Venture Partners, North South Ventures, Intermountain Venturesm Michael Secora, Viswa Colluru, Hummingbird Ventures, CJNV BioVentures, EPIC Ventures, Chris Gibson,
09-06	Jellatech	RTP	Instruments & Tools	\$3.50	Seed	10

September - Seed Funding Continued (3/3)

<u>Date</u>	<u>Company</u>	Investment Cluster	<u>Modality</u>	Investment (\$M)	<u>Round</u>	<u>Investors</u>
09-01	Innovac Therapeutics	Boston	mRNA	\$18.00	Seed	Elikon Venture, Vision Plus Capital, Yunion Healthcare Ventures, TG Sino-Dragon Fund
09-01	Elastin Biosciences	Europe - UK	Unknown	\$2.50	Seed	Spin off of Longaevus Technologies
09-01	Measurlabs	Europe	Instruments & Tools	\$2.62	Seed	Venture Friends

September - Series A (1/2)

<u>Date</u>	Company	Investment Cluster	<u>Modality</u>	Investment (\$M)	Round	<u>Investors</u>
09-27	Sitryx Therapeutics	Europe - UK	Small Molecule	\$39.00	Series A	Oxford Science Enterprises, SV Health Investors, Eli Lilly & Company, Sofinnova Partners, Longwood Fund and GSK.
09-27	Automera	Seattle	Small Molecule	\$16.00	Series A	co-led endeavor by ALSP and ClavystBio, with participation from Singapore-based global investor EDBI, Xora Innovation, and other undisclosed investors
09-27	CellFE	San Francisco	Instruments	\$22.00	Series A	M Ventures, with participation from GreatPoint Ventures, Riverine Ventures and existing investors Cota Capital, Dynamk Capital, Elm Street Ventures, Embark Ventures, EGB Capital and Khosla Ventures
09-26	Lucid Scientific	Atlanta	Instruments & Tools	\$7.00	Series A2	Georgia Research Alliance Venture Fund, and Dynamk Capital,
09-25	Crucible Therapeutics	Europe - UK	Gene Therapy	\$6.10	Series A	Northern Gritstone and Argobio Studio
09-25	Adela	San Francisco	Diagnostics	\$48.00	Series A	RA Capital, OrbiMed, LabCorp, F-Prime Capital, Deerfield, Decheng Capital
09-20	TOLREMO therapeutics	Europe	Small Molecule	\$39.00	Series A	BioMedPartners AG, Pierre Fabre Invest

September - Series A Continued (2/2)

<u>Date</u>	Company	Investment Cluster	<u>Modality</u>	Investment (\$M)	Round	<u>Investors</u>
09-18	Broken String Biosciences	Europe - UK	Gene Therapy	\$15.00	Series A	co-led by Illumina Ventures and Mérieux Equity Partners, with contributions from HERAN Partners, and existing investors Tencent and Dieter von Holtzbrinck Ventures (DvH Ventures).
09-13	Mironid	Europe - UK	Small Molecule	\$30.70	Series A	Roche, Sofinnova Partners, european Investment Fund, Epidarex Capital, BioGeneration Ventures, Scottish Enterprise, University of Strathclyde
09-12	Actio Biosciences	San Diego	Biologic	\$55.00	Series A	Canaan, DROIA Ventures, Deerfield Management, EcoR1 and Euclidean Capital
09-07	Corteria Pharmaceuticals	Europe	Biologic	\$71.00	Series A	OrbiMed, Jeito Capital, Kurma Partners, Fountain Healthcare Partners, V-Bio Ventures, Invivo Capital and Omnes Capital
09-07	Inceptive	San Francisco	Al	\$100.00	Series A	NVIDIA's NVentures and Andreessen Horowitz
09-03	SOMAÍ Pharmaceuticals	Europe	Cannabinoid	\$5.20	Series A	Undisclosed

September - Series B (1/3)

<u>Date</u>	<u>Company</u>	Investment Cluster	<u>Modality</u>	Investment (\$M)	Round	<u>Investors</u>
09-28	Evozyne	Chicago	Al	\$81.00	Series B	Fidelity Management & Research Co. and OrbiMed with participation from NVentures, NVIDIA's venture capital arm. Previous investors Paragon Biosciences and Valor Equity Partners also expanded their support in the round.
09-28	Harbinger Health	Boston	Diagnostic	\$140.00	Series B	Flagship Pioneering, Pictet, Partners Investment, and M&G
09-28	Deka Biosciences	Washington D.C. / Baltimore	Small Molecule	\$20.00	Series B2	Leaps by Bayer, Lumira Ventures, O-Bio (Echo Investment Capital), Viva BioInnovator, Alexandria Venture Investments, Amana Investments, Plains Ventures, ATEM Capital and CEO John Mumm.
09-26	Acesion Pharma	Europe	Small Molecule	\$47.50	Series B	Canaan and Alpha Wave, and with participation by the Global BioAccess Fund and existing investor Novo Holdings
09-22	Qihan Biotech	China	Gene Therapy	\$16.00	Series B	Zhejiangsheng Chanye Jijin
09-20	Corsair Pharma	San Francisco	Transdermal Patch	\$23.00	Series B	New Rhein Healthcare

September - Series B Continued (2/3)

<u>Date</u>	<u>Company</u>	Investment Cluster	<u>Modality</u>	Investment (\$M)	Round	<u>Investors</u>
09-19	ReCode Therapeutics	San Francisco	mRNA	\$50.00	Series B2	BLV and Solasta Ventures
09-13	Rejuveron Life Sciences	Europe	Biologic	\$75.00	Series B	Mubadala Capital Ventures, Catalio Capital Management, Apeiron Investment Group
09-13	AWAK Technologies	Asia	Device	\$20.00	Series B	Vickers Venture Fund, Lion X Ventures,
09-12	Rome Therapeutics	Boston	mRNA	\$72.00	Series B	Johnson & Johnson Innovation-JJDC, Bristol Myers Squibb, Eurofarma Ventures, Luma Group, Mirae Asset Capital, family offices Raycap and Sigmas Group, ARCH Ventures, GV, Section 32, Sanofi Ventures, Andreessen Horowitz, Mass General Brigham Ventures, Casdin Capital and Alexandria Venture Investments
09-12	Renibus Therapeutics	Texas	Biologic	\$72.00	Series B	Undisclosed
09-11	Aorui Bio	China	Al	\$100.00	Series B	Fortune Venture Capital
09-08	Grit Biotechnology	China	Cell Therapy	\$60.00	Series B	CICC, Qianhai Ark, Liando Group, Yuanhe Capital, HeFangTian Venture Partnership and existing investors Sherpa Healthcare Partners, Decheng Capital and Matrix Partners China.

September - Series B Continued (3/3)

<u>Date</u>	Company	Investment Cluster	<u>Modality</u>	Investment (\$M)	Round	<u>Investors</u>
09-07	Mariana Oncology	Boston	Radiopharmaceutical	\$175.00	Series B	Deep Track Capital, Forbion, Atlas Venture, Access Biotechnology, RA Capital Management, Eli Lilly, Nextech Invest and Citadel Surveyor Capital
09-06	Tentarix Biotherapeutics	San Diego	Biologic	\$35.00	Series B	Versant Ventures, Samsara BioCapital, Gilead Sciences, Amplitude Venture Capital
09-06	Tentarix Biotherapeutics	San Diego	Biologic	\$35.00	Series B	Amplitude Ventures, Gilead Sciences, Versant Ventures and Samsara BioCapital
09-06	Tribun Health	Europe	Al	\$15.80	Series B	Autonomous Patient Fund of Bpifrance With LBO, Owkin and Vivalto Family as Prominent Investors

September - Series C (1/2)

<u>Date</u>	<u>Company</u>	Investment Cluster	<u>Modality</u>	Investment (\$M)	Round	<u>Investors</u>
09-27	Avalyn	Seattle	Inhalant	\$150.00	Series C	Wellington Management, Vida Ventures, Surveyor Capital, SR One, Rock Springs Capital, RiverVest, Pivotal bioVenture Partners, Piper Heartland Capital, Perceptive Advisors, Novo Holdings,
09-27	MitrAssist	Isreal	Medical Device	\$100.00	Series C	Centurium Capital & 6 Dimensions
09-21	LYNK Pharmaceuticals	China	Small Molecule	\$122.00	Series C	New Alliance Capital, Lilly Asia, Howbury Primary Fund, Haibang Capital, China Prosperity Investment
09-21	Osteal Therapeutics	Texas	Biologic	\$23.00	Series C	Gideon Strategic Partners and returning investors Johnson and Johnson Development Corporation (JJDC), HM Capital, Prism Ventures
09-14	Generate Biomedicines	Boston	Al	\$273.00	Series C	Amgen, NVIDIA's NVentures, MAPS Capital (Mirae Asset Group), Pictet Alternative Advisors, Flagship Pioneering, a wholly-owned subsidiary of the Abu Dhabi Investment Authority, Fidelity Management & Research Company, funds and accounts advised by T. Rowe Price Associates, Inc., ARCH Venture Partners and March Capital

September - Series C Continued (2/2)

<u>Date</u>	Company	Investment Cluster	Modality	Investment (\$M)	Round	<u>Investors</u>
09-13	Canton Biologics	China	СДМО	\$223.00	Series C	SDIC Venture Capital, Taipu Life Sciences Investment, SDIC Venture Capital, Qianyin Investment, Guangdong Technology Financial Group
09-06	Apollo Therapeutics	Europe - UK	Biologic	\$226.50	Series C	Patient Square Capital, M&G plc, Rock Springs Capital and two unnamed U.S. public pension plans
09-06	Ibex Medical Analytics	Israel	Diagnostics	\$55.00	Series C	orth. Additional participants in the round were Sienna Venture Capital and existing investors in the company, Octopus Ventures, aMoon, Planven Entrepreneur Ventures and Dell Technologies Capital.
09-05	Star Therapeutics	San Francisco	Biologic	\$90.00	Series C	Sofinnova Investments, Qatar Investment Authority, Catalio Capital Management, Agent Capital, Soleus Capital, NYBC Ventures, Westlake Village BioPartners, OrbiMed, Redmile Group, RA Capital Management, New Leaf Venture Partners, Cormorant Asset Management and Cowen Healthcare Investments

September - IPO, and Post IPO Debt & Equity

<u>Date</u>	Company	Investment Cluster	<u>Modality</u>	Investment (\$M)	Round	<u>Investors</u>
09-19	RayzeBio	San Diego	Radiopharmaceutical	\$358.00	IPO	
09-15	Neumora	Boston	Biologic	\$250.00	IPO	
09-19	Elutia	Washington D.C. / Baltimore	Tissue Engineering	\$10.50	P.I.P.E	Nantahala Capital Management, HighCape Partners
09-18	Oxurion	Europe	Biologic	\$1.01	Post IPO Debt	Atlas Special Opportunities
09-11	ImmunityBio	Los Angeles	Hybrid	\$200.00	Post IPO Debt	Nant Capital
09-25	HillVax	Boston	Vaccine	\$115.00	Post IPO Equity	
09-22	BridgeBio Pharma	San Francisco	Hybrid	\$250.00	Post IPO Equity	Qatar Investment Authority
09-13	Cingulate Inc.	Kansas City, KA	Small Molecule	\$4.00	Post IPO Equity	
09-13	Hoth Therapeutics	New York	Biologic	\$2.89	Post IPO Equity	
09-11	CymaBay Therapeutics	San Francisco	Small Molecule	\$258.70	Post IPO Equity	Andy Hill CARE Fund, Washington's Cancer Research Endowment
09-11	Palisade Bio	San Diego	Small Molecule	\$2.00	Post IPO Equity	
09-11	ImmunityBio	Los Angeles	Hybrid	\$270.00	Post IPO Equity	Nant Capital

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September - Other

<u>Date</u>	Company	Investment Cluster	<u>Modality</u>	Investment (\$M)	Round	<u>Investors</u>
09-27	Eagle Genomic	Europe - UK	Instruments & Tools	\$4.00	Venture Round	Environmental Technologies Fund, abrdn plc, and a consortium of investors headed by Granpool Innovative Investments
09-22	Tierra Biosciences	San Francisco	Instruments & Tools	\$17.60	Venture Round	Undisclosed
09-21	MedTrace Pharma	Europe	Diagnostic	\$20.00	Venture Round	Verve Venture, Swisscanto Private Equity, ATP
09-20	Day Zero Diagnostics	Boston	Diagnostics	\$16.00	Venture Round	Undisclosed
09-15	Nephron Pharmaceuticals	South Carolina	CDMO	\$350.00	Undisclosed	BlackRock Capital Investment Advisors, LLC ("BlackRock") and PNC Bank, National Association
09-06	Nimbus Therapeutics	Boston	Small Molecule	\$210.00	Private Equity Round	Google Ventures, SR One, Atlas Venture, Bain Capital Life Sciences, BVF Partners L.P., Gates Frontier, Lightstone Ventures, Pfizer Ventures, RA Capital Management and SV Health Investors



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