MEDCITY
LONDON

ADVANCED THERAPIES: LONDON's LANDSCAPE

19 March 2025

Advanced Therapies in London

March 2025

MedCity have reviewed London's Advanced Therapies landscape, providing an overview of the core strengths such as academic, clinical, manufacturing, policy and financial infrastructure, and the key company trends in London.

Drawing from a range of sources, this review aims to provide an overview of the growth in the advanced therapies subsector, and to emphasise how a balance of manufacturing infrastructure, investment, academic excellence, and clinical expertise have enabled high volumes of growth and early commercial success for London's companies.

Initially presented at Advanced Therapies Europe, 2025

By Ella Churchill, Insights Manager, Life Sciences

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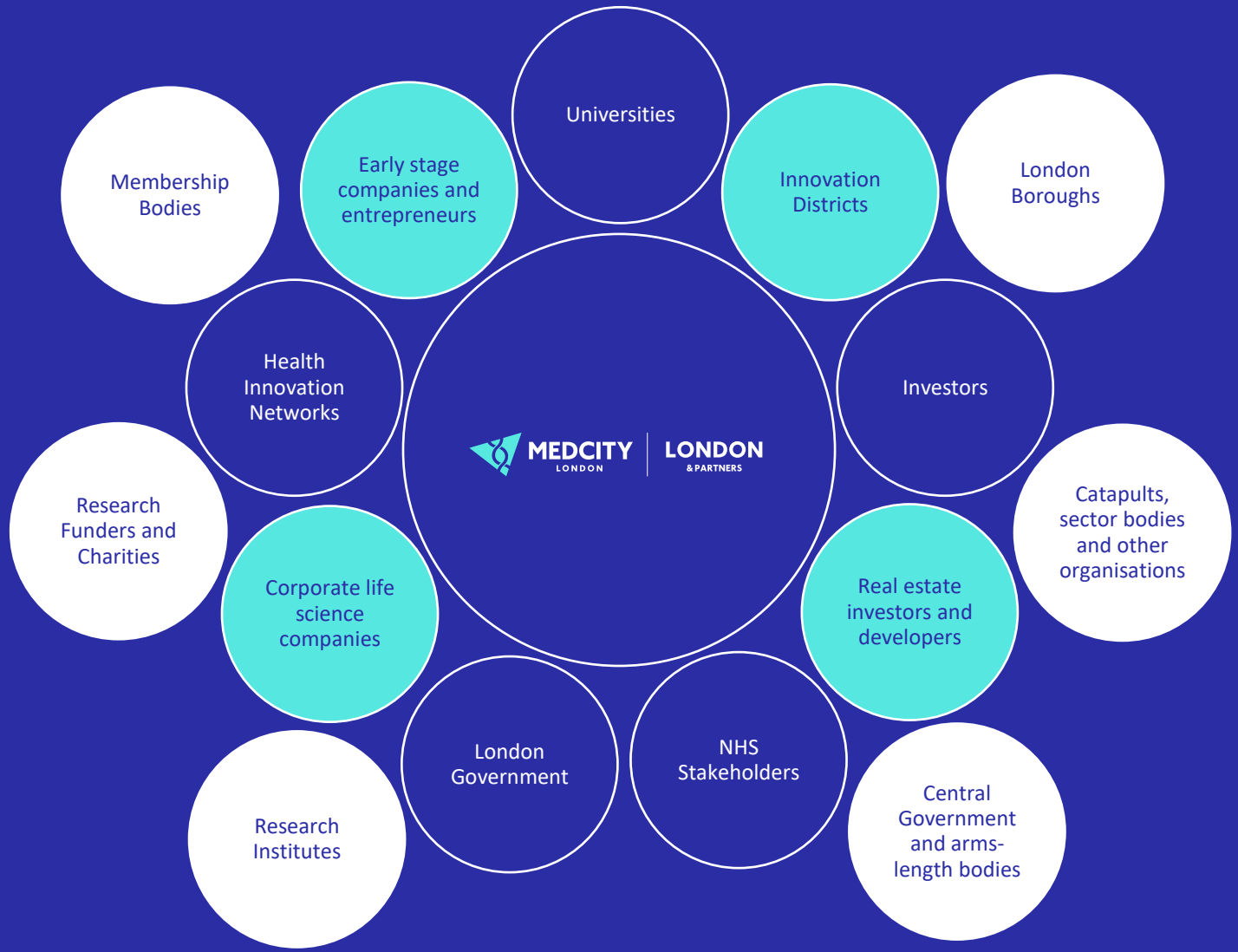
WHO WE ARE

London & Partners is the business growth and destination agency for London. We are a social enterprise, combining purpose with commercial rigour. We are funded by grants, partners and our portfolio of venture businesses.

The **MedCity** team is a unifying voice for Life Sciences in London. We amplify London's strengths, provide information and resources to businesses and entrepreneurs, and support the ecosystem to grow in London.



Why London?

Infrastructure to drive concept to clinic development of advanced therapies

London combines:

1. World-class talent pool
2. Clinical trial excellence
3. Access to capital
4. Co-ordinated ecosystem
5. Global scalability

London has a unique blend of world-class talent pool, clinical trials excellence, proximity to capital and regulatory and policy experts, and a co-ordinated ecosystem of 8 life sciences clusters which promote the growth and success of life science businesses within one of the most globally connected cities in the world.

MedCity have recently published core resources which highlight the life sciences infrastructure in London.

[1] Dealroom, March 2025
[2] MedCity Life Sciences Global Cities Comparison Report 2024
[3] Medcity London Lab Showcase 2024

Life Sciences Global Cities Comparison[2]

- #1 for Health Research
- #2 for Research Innovation
- #3 Globally

The London Offer

- $1.2BN invested in 2024[1]
- 75,000 Life Science students
- 37 BRCs & MRCs

Cluster Organisations

- 8 Life Science Clusters
- Distinct specialisms
- Dedicated Support to Grow

Lab Space[3]

- Investors & Universities co-located
- 7.8m ft² by 2032
- 2.5x Cambridge & Oxford combined

There are more University Hospitals with deep translational immunology in London than I think anywhere else in the world.

So, for us it's a phenomenal place to be, and a great place for talent as a city which attracts young people from all over the world.

Iain McGill, CEO, Quell Therapeutics

London for advanced therapies

London is the European destination of choice for cell and gene therapy developers.

1 in 3 of Europe's advanced therapies companies are in the UK

…of which more than **1 in 3** companies are in London

1 in 3 UK commercial and clinical cell therapy manufacturing sites are in London

1 in 6 of Europe's advanced therapies workforce are in London

67% of UK investment in advanced therapies has been received by London's companies in the past 10 years

London Advanced Therapies Story

A UK hub for advanced therapies clinical development

Since 2006, consistent investment in infrastructure to meet the demand for GMP manufacturing of vectors and commercial grade cell therapy have supported the commercial development of new cell and gene products in London.

Now, 1 in 3 of the UK's commercial and clinical manufacturing sites are in London, which support the highest concentration of cell and gene therapy companies in Europe to grow from concept to commercial product.

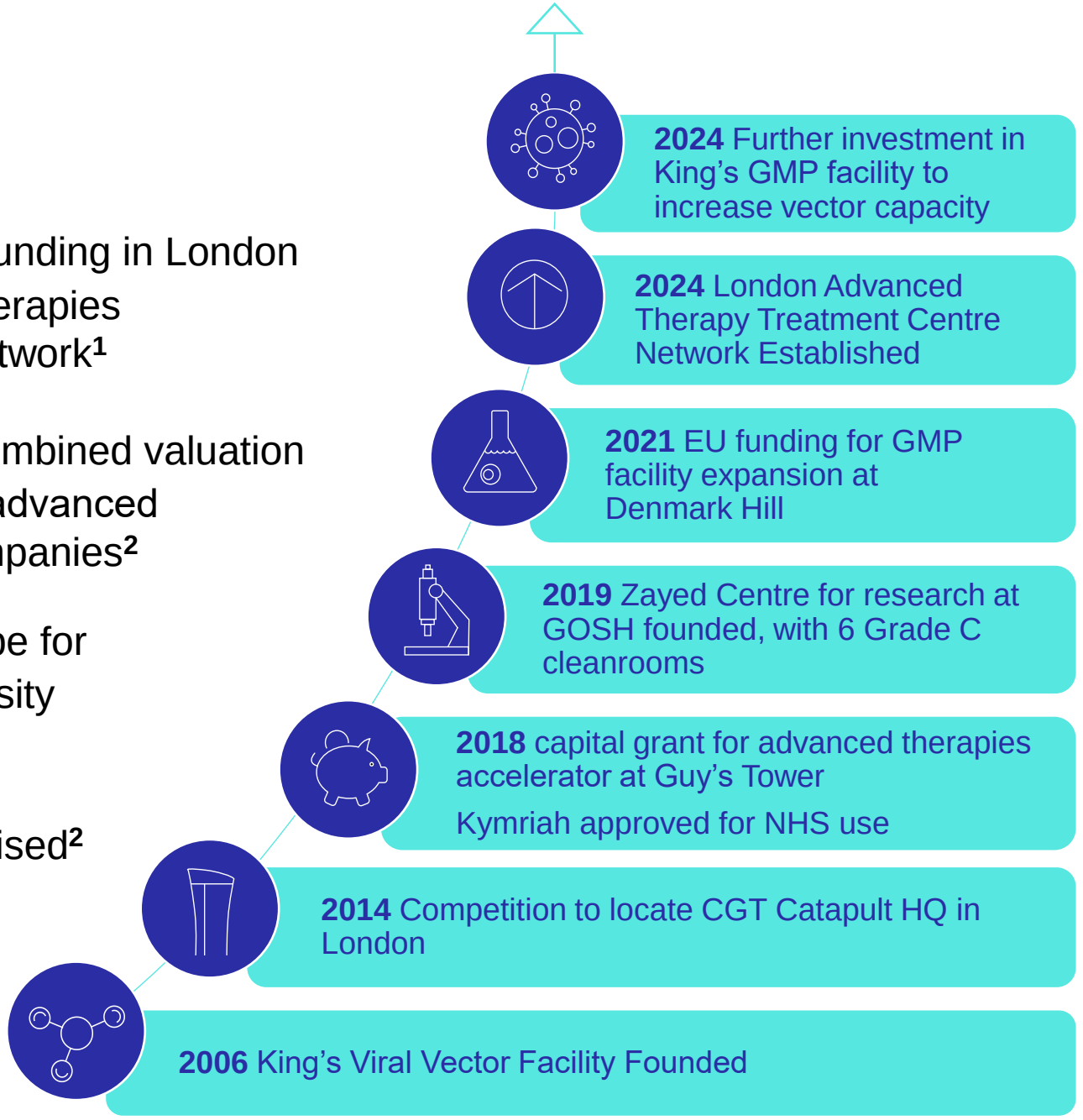
[1] NIHR https://www.nihr.ac.uk/news/ps179m-advanced-therapy-treatment-centre-network-bolster-clinical-trial-infrastructure-uk
[2] Dealroom, March 2025

£17.9M funding in London Advanced Therapies Treatment Network[1]

£75Bn combined valuation for London's advanced therapies companies[2]

1st in Europe for company density

£1.3Bn investment raised[2]



London Spin Out Gains FDA Approval For Next-Generation CAR-T

FDA approves obecabtagene autoleucel for adults with relapsed or refractory B-cell precursor acute lymphoblastic leukemia

On November 8, 2024, the Food and Drug Administration approved obecabtagene autoleucel (Aucatzyl, Autolus Inc.), a CD19-directed genetically modified autologous T cell immunotherapy, for adults with relapsed or refractory B-cell precursor acute lymphoblastic leukemia (ALL).

Full prescribing information for Aucatzyl will be posted on Drugs@FDA.

“

It has been exciting to support Autolus and see its paradigm-shifting advanced therapeutic reach this hugely important stage. Success in developing obe-cel shows what can be achieved through **collaboration between UCL, its affiliated hospitals and industry.**

Dr Martin Pule
Director of the UCL CAR T cell Programme
Founder and Scientific Director
Autolus

[1] FDA.gov
[2] UCL https://www.ucl.ac.uk/news/2024/nov/ucl-spinout-autolus-gains-us-approval-cancer-therapy

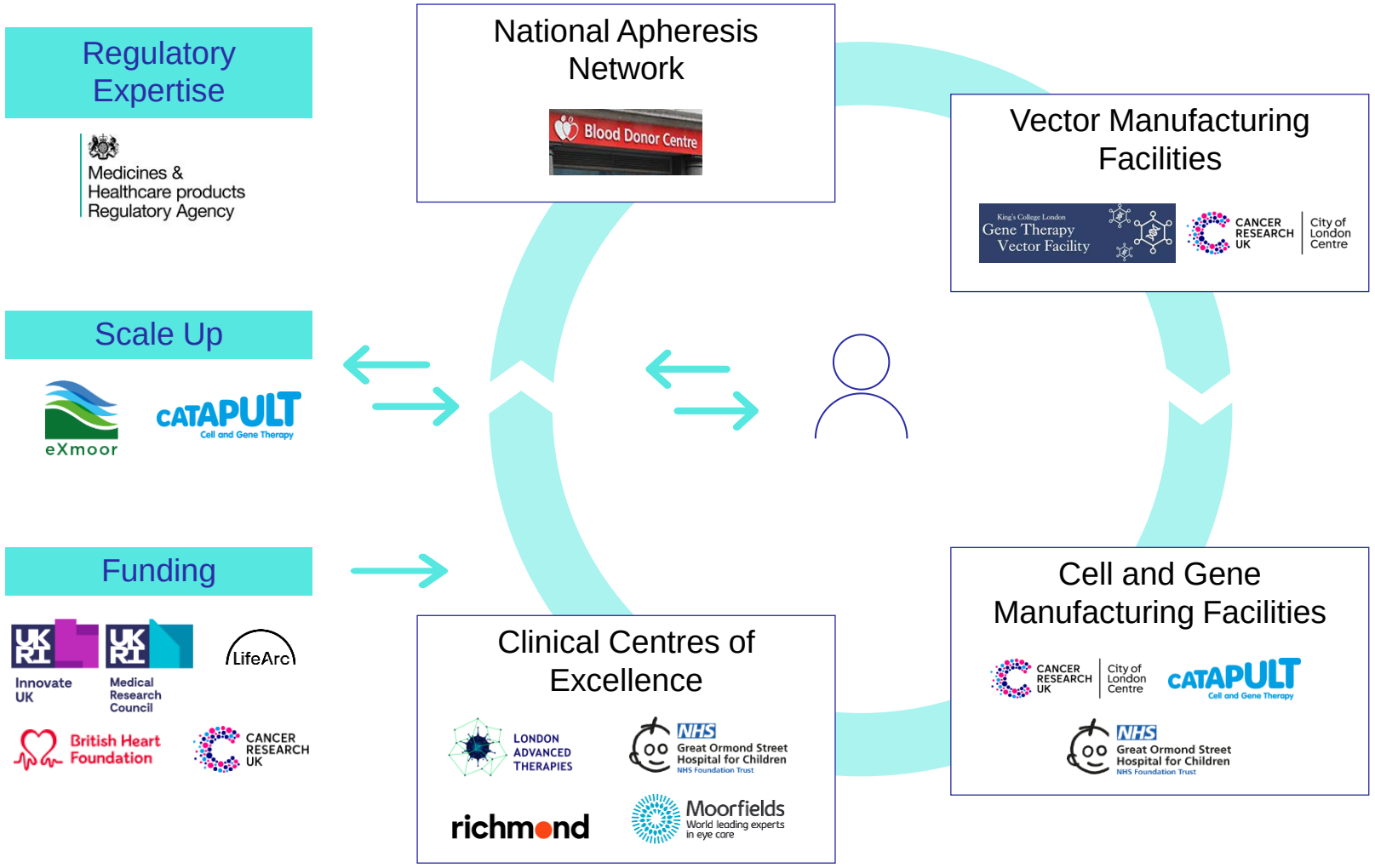
The London Vein-to-Vein Journey

Centers of excellence and expertise from bench to bedside

London's connected ecosystem provides infrastructure and expertise across the vein-to-vein journey.

Supported by LifeArc's funding for gene therapy hubs, deep translational immunology expertise, process development infrastructure across London's Universities and centres of clinical excellence.

London has the infrastructure for scaled delivery of groundbreaking therapies.



Advanced Therapy Knowledge Power

World-leading research translates to unicorn-worthy ventures

43% of the London advanced therapy company landscape are UK University spin outs, demonstrating the key role of the knowledge economy in advanced therapies spin out generation.

UCL Is home to Europe's largest translational programmes of CAR-T cell therapy in adults and children[1].

[1] UCL 2025 https://www.ucl.ac.uk/translational-research/sites/translational-research/files/cgr_therapies_report.pdf
[2] Linkedin, March 2025
[3] Pubmed, March 2025
[4] Beauhurst, March 2025

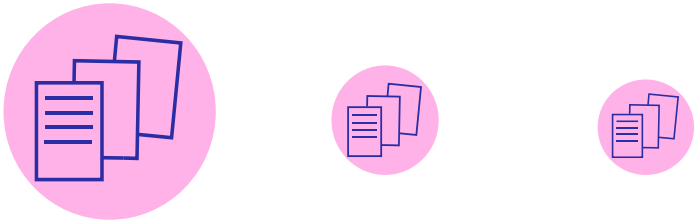
London has
3 of the top 15

global universities for clinical and health research

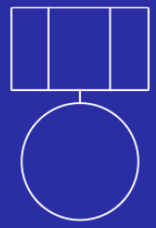
Size of CGT Workforce

USA	EU	UK	**London**
18,000	7,500	2,600	1,400

Volume of CGT Publications

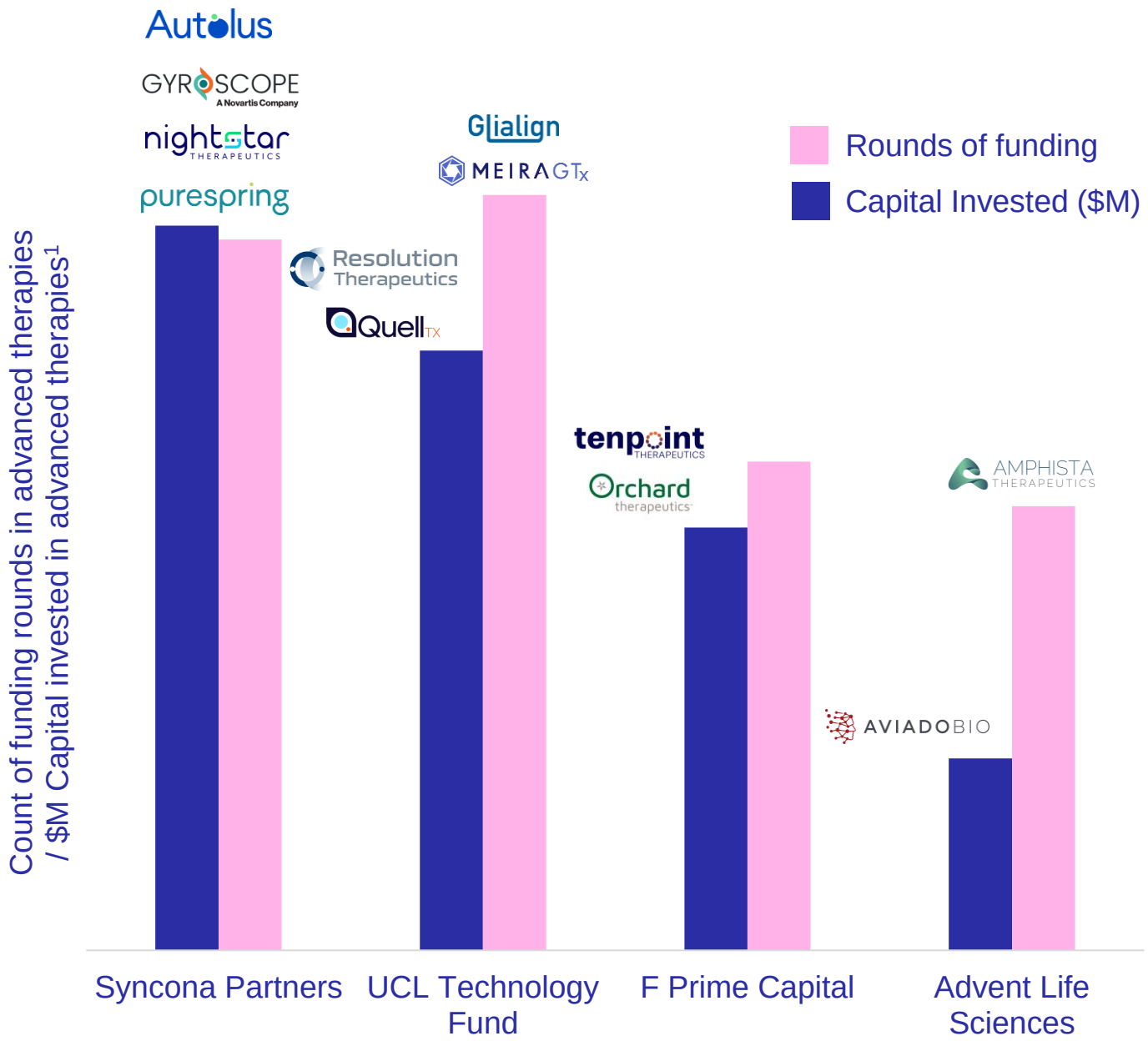


California	Massachusetts	**London**
4,177	2,664	2,200



London has
19

physiology or medicine Nobel laureates, the 2nd highest output globally



[1] Beauhurst, March 2025

Key funders in London

> Access to early-stage and growth-stage funding was another key driver that we've been able to capitalise on since moving to London.
>
> Our founding investor, Syncona, is located here, and the infrastructure and access to funding from global markets has provided Purespring with a solid foundation for growth.
>
> **Sachin Kelkar, CFO**
> purespring

Syncona Partners and UCL Technology Fund are the most prevalent venture capital funders of advanced therapies in London, followed by F Prime Capital and Advent Life Sciences.

Many of these funds have co-funded major companies such as Quell therapeutics, Resolution Therapeutics, Orchard Therapeutics, and Aviadobio, who now benefit from colocation with their funding teams.

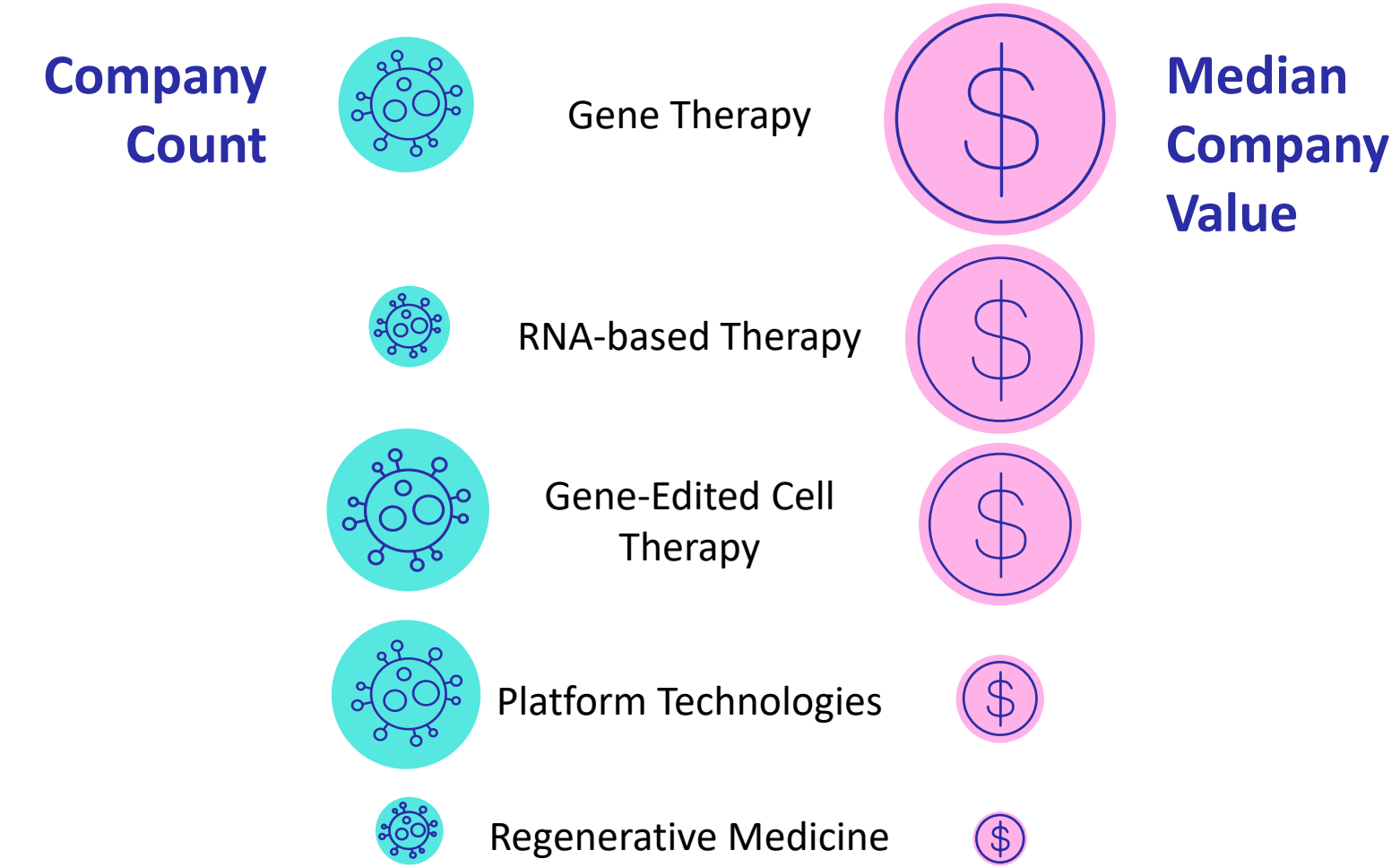
Advanced Therapy Company Landscape

Advanced therapies output by university, technology, and investment

Most London companies focus on gene-edited cell therapies, while top-valued ones develop gene therapies like Vertex and Orchard.

UCL leads in spin-outs, especially in advanced therapies, followed by King's, Imperial, and Cambridge. Platform developers, such as Ori Biotech and IMU Biosciences, have spun out of UCL and The Francis Crick Institute.

Rank	Origin University of CGT Spin Outs
1	University College London
2	King's College London
=3	Imperial, Cambridge
=5	Aberdeen, Bristol



£447M acquisition
By Kyowa Kirin, 2024
UCL spin out, 2015

£10M License deal
By AstraZeneca, 2024
UCL & King's spin out, 2019

Acquisition
By Takeda, 2021
King's & Crick spin out, 2016

London's clusters

8 Life Sciences Clusters
1 City

Each with distinct research focus, academic expertise, and clinical infrastructure.

Clusters coordinate research efforts through co-location with collaborators, investors, local health networks, and local government leadership.

London's Trials

Trial density correlates to clusters with anchor institutions and innovation hubs focused on cell and gene therapies

70% of edited cell therapy trials in Knowledge Quarter[1]

15% of cell and gene trials in SC1[1]

28% of gene therapy trials in Moorfields Eye Hospital[1]

Trials are in proximity to anchor research locations such as UCL, Imperial, Sutton, King's College London, and Moorfields Eye Hospital.

[1] GlobalData, March 2025

London's Companies

Companies co-locate to University and anchor institutions

28% in White City[1]
38% in the Knowledge Quarter[1]
8% in SC1[1]
8% in Canary Wharf[1]

Most companies are in the Knowledge Quarter, closely followed by White City, where nearly half of the spin outs in the cluster are from UCL.

[1] Beauhurst, March 2025

London's Advanced Therapy Trial Landscape

A centre for excellence, and efficiency in phase I

There is a slightly higher proportion of gene therapy versus cell therapy trials, and recently gene therapy trials have trended towards more early-stage trials[2].

A significantly higher number of gene therapy trials are industry sponsored than cell therapy trials, thanks in part to the high output of clinical trials in cell therapy from UCL and King's College London.

[1] GlobalData, March 2025
[2] Cilnicaltrials.gov, March 2025

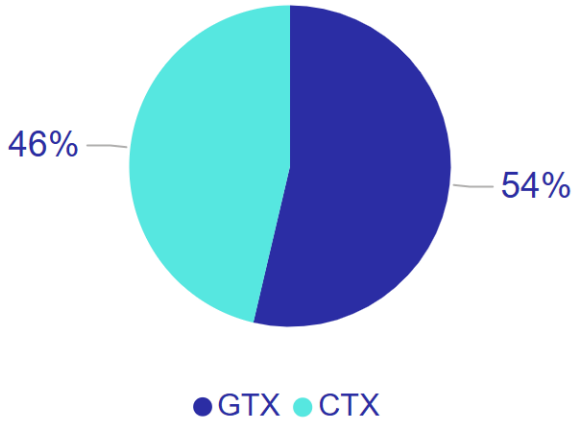
83%
increase in trials initiated between 2020-2025[1]

>86%
Of trials are industry-sponsored since 2020[1]

Top Companies (Trial Sponsors)[1]
Johnson & Johnson
Novartis
Moderna, Vertex,
Autolus, Gilead, Intellia, Spur Therapeutics
Bristol-Myers Squibb
Prevail Therapeutics

Top Indications[2]
Multiple Myeloma
ALL
B-ALL
DMD
Haemophilia A
Retinitis Pigmentosa

Number of Cell vs. Gene Therapy Trials in London (Since 2000)[2]



More than half
of London's cell & gene trials are phase I or II[2]

68%
of cell therapy trials are industry sponsored[1]

92%
of gene therapy trials are industry sponsored[1]

Richmond Pharmacology

Excellence in first-in-patient studies with 24 years experience in phase I research & protocol design

Beyond London's world-class research hospitals, there are a network of global expert CROs in London who can support first-in-patient clinical trials. Richmond Pharmacology is a national centre working in collaboration with the NHS and a national network of hospitals and have a track record of collaboration with MHRA enabling first-to-dose studies.

The Southwark-based CRO demonstrates excellence in patient recruitment and follow up, and clinical trial design.

Intellia THERAPEUTICS

Intellia Therapeutics FIH PI within Target Population

- First to dose patient with ***in vivo*** CRISPR-Cas9 clinical trial which was run across 3 centers globally

Alnylam®

Anylam RNAi FIH PI Study in Hypertension

- Screened 442 volunteers, enrolled 99 patients for a 4-part study with biannual administration

Cardior

Cardior FIH Phase Ib Oligonucleotide Therapy for Heart Failure

- First in *patient* study, bypassed PD PK studies in healthy volunteers
- Saved 1 years' development time, demonstrated efficacy in target population, accelerated PII trials
- 100% participant retention during pandemic
- In PII: Patients were screened & identified within 10 days of myocardial infarction

The London biotech ecosystem is vibrant, with a strong network of accelerators, incubators and support organisations specifically designed to foster the growth of life sciences companies.

London has provided us with unparalleled opportunities to grow, collaborate and access the resources critical for a biotech's success.

Sachin Kelkar, CFO, Purespring Therapeutics

purespring

Manufacturing Facilities

The investment in GMP manufacturing infrastructure has ensured capacity to meet the demand for concept to clinic manufacturing of cell and gene therapies for London's companies, as well as clients across Europe who work with these centres of excellence. Whilst not exhaustive of all facilities, below are some core institutions who can provide manufacturing capacity and consultation.

Royal Free Hospital London (UCL)

Cleanroom facilities for the manufacture of ATMPs

- 1st GMP lab set up in the UK
- Semi-automated closed cell manufacture
- CliniMACS prodigy platforms and Lonza 4D-Nucleofector LV-Unit platform
- **5 grade B, 1 grade C, 4 grade D** cleanrooms
- LVV production facilities
- Cell and Gene manufacturing, spanning autologous, allogeneic, immune cell, stem cell and gene modification

Cell and Vector Manufacturing Core

Cell Therapy Catapult at Guy's Hospital

First location of the national cell therapy catapult in Guy's Tower

- **1,200m²** facility at Guy's Hospital
- Technology & **process innovation** labs for cell and gene therapy
- ATMP process technology capabilities spanning:
    - Viral vector
    - Stem cells
    - Cell engineering
    - **Bioprocessing**
    - **Analytical and GMP translation**

London CGT Catapult

King's Gene Therapy Vector Facility

One of the largest academic vector manufacturing facilities globally

- **>1,000** batches manufactured for clinical trials
- **60+** staff working across **LVV, AVV** & **retroviral** vectors
- **20 years**' legacy of GMP viral vector manufacturing
- Experienced release to the EU & US
- Fast, affordable, dependable support for early to mid-stage development
- Offer support from regulatory to QC, MSAT, process development & scale up
- **5 GMP cleanrooms**, and more to come…

GTVF

World-Class Laboratory Facilities

Sufficient lab space to supply the forecasted demand by 2029 for the entire ‘Golden Triangle’

Once greater capacity for manufacturing and scale up is required, developers can access plenty of world-class laboratory space to scale operations in the world’s most connected city.

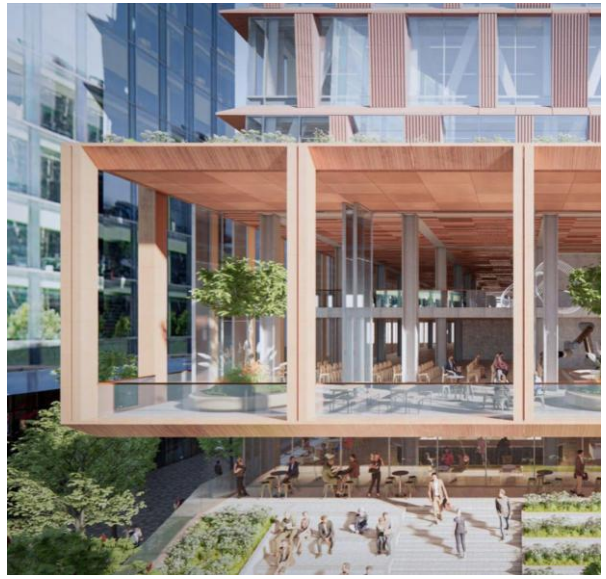
Real estate which offers:

- Collaborative communal space
- Incubator facilities
- Proximity to Universities
- International connection
- Increasing manufacturing facilities
- Amenities including business lounges, members clubs and roof terraces

See MedCity’s full Lab Space Showcase for details

1.58M ft²
Life sciences real estate developed since 2021

7.79M ft²
Total space by 2032



Policy Support for Innovative Therapies

In London, developers are co-located with global thought leaders in policy, regulatory, and analytical development guidance

MHRA

Focussed support for advanced therapies

- iLAP Unites NHS, MHRA and HTAs from the early stages of clinical development, ensures NHS operational readiness
- IRP supports UK approval for medicinal products approved by selected regulators

96% of trials since September 2023 received a combined review decision within 60 days

30 days assessment for all clinical trial applications since 2023

MHRA

British Pharmacopoeia: Quality Standards

Comprehensive guidance on best practice in assay development for ATMP products

- Partnership with NHS, academia, industry and MHRA to provide guidance and standardization platform for the community
- Latest guidance covers:
  - Flow cytometry
  - Vector copy number
  - rAAV capsid characterization
  - T and NK cell characterization assays

British Pharmacopoeia

NICE

Early engagement scheme

- Provide metrics to focus on and NICE is used as a global price marker
- Increases the value of developing in the UK to set global value and pricing for drug
- York University pharmacoeconomics center is a global leader with multiple disease centers and provides excellent models to develop with NICE
- Provides support for companies aiming to enter the NHS market

NICE Advice Services

The talent base and science is already here.

If we can shift both investment and leadership aspirations, then the UK certainly has the potential to create multiple homegrown biotech giants and truly play alongside the likes of Boston; sharing in a talent and investment pool and strengthening each other.

LONDON FOR ADVANCED THERAPIES

- Top talent & deep translational expertise
- Manufacturing & vein-to-vein network
- Access to capital
- Clinical expertise & infrastructure
- World-class lab facilities
- Proximity to regulators & HTAs

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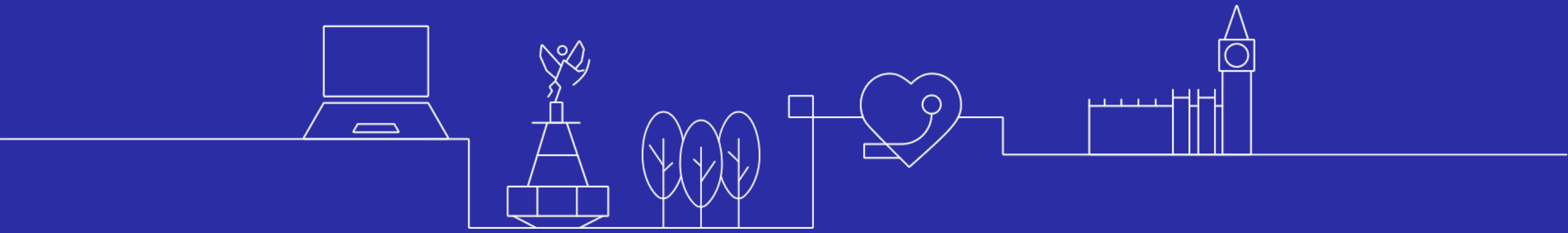
MORE FROM MEDCITY



The London Offer

“A prime destination for Life Science"

$1.2BN invested in 2024

75,000 Life Science students

37 BRCs & MRCs

"Excellent access to Government resources and support"

Home of the MHRA & NICE

Lowest corporation tax in the G7

"London is a great place to live and work"

Vibrant, diverse culture

2,000 years of history

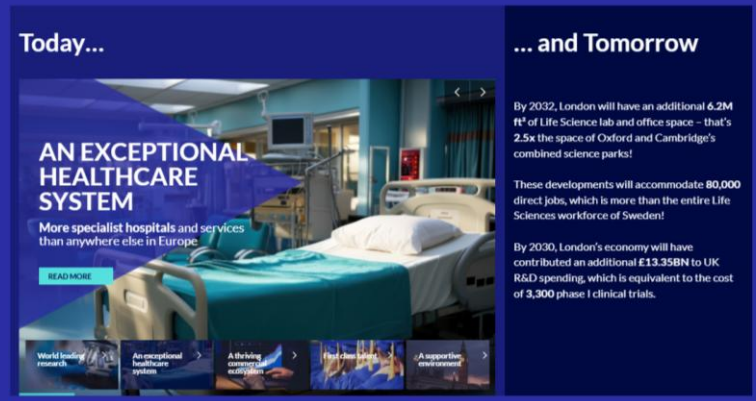
World-leading knowledge economy

"London Life Science makes global impact"

An unrivaled environment for opportunity and innovation.

London is the catalyst for global healthcare advances

LONDON: WHERE THE WORLD COMES FOR LIFE SCIENCE.



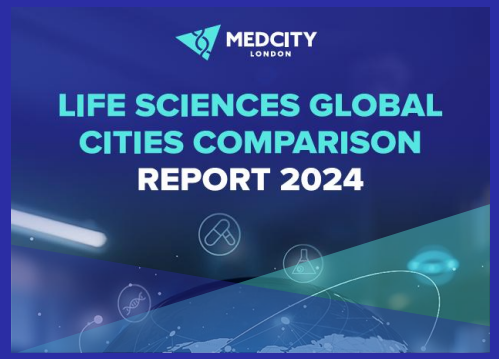
A ‘one-stop-shop’ to explore the key strengths, infrastructure, latest news, and key stakeholders in London’s life sciences ecosystem.

Updated regularly, the site is a live resource to assess London’s life sciences ecosystem and understand industry trends in the sector.

Explore at lifescience.london

MedCity Benchmarking

This report examines five key rankings to benchmark 20 global cities and their life sciences ecosystems.



#1 BOSTON

#2 NEW YORK

#3 LONDON

Professor, the Lord Ara Darzi
Co-director of the Insitute of Global Health Innovation, Imperial

The analysis included in the first MedCity Life Sciences Global Cities Comparison report robustly captures the strengths of this great city life sciences ecosystem.

London ranks:

#1 for Health Research Environment

#2 for Research Innovation

#2 for Business Environment

Overall Rankings

	Research Innovation	Health Infrastructure	Talent Ecosystem	Investment Environment	Business Environment	Overall Rank
Boston	1	3	1	2	3	1
New York	3	2	5	1	1	2
London	**2**	**1**	**4**	**4**	**2**	**3**
San Francisco	4	8	2	3	8	4
Paris	8	5	9	8	7	5
Tokyo	10	4	8	10	4	6
Singapore	11	10	6	6	16	7
San Diego	6	7	17	7	6	8
Shanghai	9	6	12	5	18	9
Cambridge	5	15	13	16	5	10
Oxford	7	12	16	18	13	11
Amsterdam	17	11	10	12	9	12
Munich	15	13	7	13	11	13
Basel	14	20	3	20	12	14
Berlin	18	9	19	9	15	15
Stockholm	13	18	11	14	10	16
Melbourne	12	14	15	17	14	17
Hong Kong	16	19	18	15	17	18
Shenzhen	19	16	20	11	19	19
Hyderabad	20	17	14	19	20	20

Importance of Clusters

All top 5 cities have organized clusters, demonstrating the benefit of a coordinated life sciences ecosystem.

Clusters link **research** institutions to regional **health** networks and **investors** to drive **economic benefit** from knowledge economies.

Supporting International Collaboration

In 2024/5, MedCity partnered with Japan's JETRO, to run a **JETRO Accelerator Programme.**

MedCity welcomed Japanese advanced therapies start ups to explore London's life sciences ecosystem and opportunities to collaborate, including:

- Networking with key ecosystem stakeholders
- Access to UCL researchers, rare disease institutes & clinical trial institutes
- MedCity support with planning and ongoing consultation
- Direct introductions with relevant researchers and experts with follow-up meetings arranged

> The programme's timing was beneficial for startups assessing whether London is the right location for clinical trials for their company.
> Exposure to key industry players such as MSD, Richmond Pharmacology, GSK and the Catapult provided valuable insights into the UK's strengths as a clinical trial hub
>
> – 2024 Programme Participant

London's spin out landscape

London spin outs receive the largest volume of funding in the UK; more than **2.7x** the next highest UK city since 2010[2]

The highest concentration of spin outs is in the **knowledge quarter**[1]

Highest rate of movement of UK University startups is from Cambridge **into London**[1]

Spin outs originating and staying in London's Universities have **the fastest time** to IPO or acquisition of all London spin outs[1]

Coming in April 2024:

Life Science Spin Out Frequency[1]	
#1	UCL
#2	Imperial
#3	King's College
#4	Queen Mary's

[1] Beauhurst, March 2025
[2] Dealroom, March 2025

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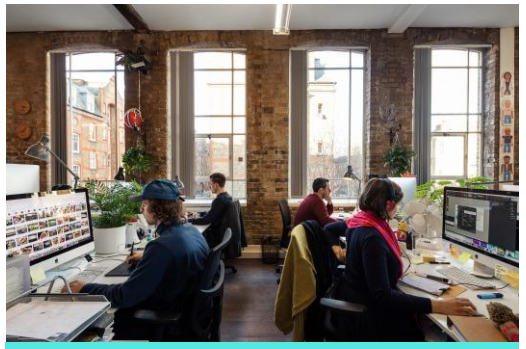
Setting up a UK entity and navigating the legal environment

Banking, accounting, tax, VAT and payroll



Recruiting your team

Finding and setting up your office or lab

Sector specific insights, contacts and events

Long term support and advice for your continued growth

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