

A GLOBAL HUB FOR LIFE SCIENCES



## Welcome



By Neelam Patel, CEO, MedCity

The life sciences sector continues to be one of the UK's fastest growing industries, with a turnover of over £88.9bn, employing 268,000 people in 6,330 businesses. Meanwhile investment into UK biotech jumped 60% to £4.5 billion in 2021, the highest year on record.

MedCity, the life sciences cluster organisation for London, is delighted to be leading the UK delegation to BioJapan for the sixth year. We are grateful for the support of our colleagues at the Japan Bioindustry Association in making our visit possible after the Covid-19 travel restrictions of the past two years. We are also happy to share that Professor David Lomas, Vice Provost (Health) University College London, and MedCity Board member, will be delivering the keynote speech at BioJapan 2022.

This year we are proud to be joined by some of the UK's leading life science organisations, showcasing the UK's vibrant ecosystem of innovative companies and academic research excellence.

Over the past year we have seen several national initiatives supporting the sector. Funding of up to £200m has been secured for the next three years to improve access to NHS and related healthcare data; a Life Sciences Investment Programme worth £200m has been launched to improve funding for growth-stage companies in the UK; and the £60m Life Sciences Innovative Manufacturing Fund (LSIMF) is supporting life science manufacturing capabilities.

Cell and gene therapy manufacturing capacity has grown by 60%. The Cell and Gene Therapy Catapult, a UK-government backed agency, has doubled existing capacity at its manufacturing centre in Stevenage and opened a new centre in Braintree. Clinical trials of Advanced Therapy Medicinal Products (ATMPs) have continued to increase year on year.

The UK also benefits from expedited pathways to development and adoption of novel medicines through the Innovative Licensing and Access Pathway, co-developed by the Medicines and Healthcare Products Regulatory Agency (MHRA), NICE and the Scottish Medicines Consortium (SMC). Meanwhile, NICE has updated the Evidence Standards Framework for Digital Health Technologies to include AI and data-driven technologies.

Come and speak with us on the UK stand to learn more about collaborative opportunities and how to set up and grow your business in the UK.



## The UK at BioJapan

Visit the UK delegation at Stand B-46, and meet with:

- MedCity and the Northern Health Science Alliance, two leading cluster organisations for life sciences in the UK, representing London and the North of England, respectively
- Leading scientists from our world-renowned universities and research institutes
- Experts on collaboration and commercialisation in the UK life sciences ecosystem

### Want to connect further?



### Wednesday, 12th October at 11:00:

Watch the keynote speech by **Professor David Lomas**, Vice Provost (Health) University College London.

### Wednesday, 12th October at 11:30:

Attend the session 'N-of-1 studies: an ultimate personalised medicine and future regulatory science' to watch a pre-recorded presentation by **Professor Phil Beales**, Medical and Molecular Genetics, University College London Institute of Child Health.

### Friday, 14th October at 14:30:

Attend the hybrid session 'Addressing challenges in the practical application of gene & cell therapy' to watch presentations by **Professor Julie Daniels** and **Professor Paul Gissen**, both from University College London.

Find us on the **Partnering System** to speak with research institutions and companies about opportunities for collaboration.

# The UK's academic and research capability

The global reputation of the UK's research capability is unrivalled for excellence and innovation. This capability underpins social and economic progress and improves lives every day.

Our universities have an undisputed track record of world-changing inventions, discoveries and collaboration with international partners. It was the combined expertise of Kyoto's Shinya Yamanaka and Cambridge's John Gurdon that provided one of the greatest breakthroughs in stem cell research – induced pluripotent stem cells – and won them the Nobel prize in 2012.

As well as high-profile success stories, these institutions provide the skills and training to develop and apply the life sciences innovations of tomorrow, ensuring the sector can continue to draw from an excellent pool of talent. Launched in 2018, the Centres for Doctoral Training (CDT) set up by universities, either individually or in partnership, train PhD students in specific research areas.

Our life sciences ecosystem also benefits from UK universities establishing and supporting spinout companies. Through the establishment of Knowledge Transfer Partnerships, centres for business support and investment bodies specific to certain institutions, UK universities are translating pioneering intellectual property developed in laboratories into commercially viable products. Collaboration is also playing a major role, with some of the most ambitious companies borne from more than one parent institution.

## Who is with us at BioJapan?

hsa Northern Health Science Alliance





### Top 20 universities\*

### **Overall rankings (2022)**

University of Oxford University of Cambridge Imperial College London University College London University of Edinburgh

#### Life Sciences and Medicine

University of Oxford University of Cambridge University College London Imperial College London King's College London

#### Engineering & technology University of Cambridge University of Oxford Imperial College London

### Computer Science and Information Systems:

University of Oxford University of Cambridge Imperial College London



### Number of students\*\*

### 2,751,865 UK students in 2020/21

### Life Sciences

2

3

7

8

2

4

8

10

14

2

3

8

5

8

17

16

627,585 life sciences students overall 157,339 postgraduate students 44,376 PhD students 55,521 postgraduate students

Al-related fields (Computer Science, Engineering & Technology) 336,985 students 89,260 postgraduate students



### **Centres for Doctoral Training (CDTs)**

The CDTs ensure the UK's future as a world leader in the global evolution of AI

£100m invested by UK Research and Innovation (UKRI)

16 CDT based at 14 universities – 300 partner organisations including the NHS and big pharma such as AstraZeneca

\* QS world ranking\*\* HESA data

## Why choose the UK?

The UK has one of the most active science communities in the G7. It is home to over 80 Nobel prizes, underpinning many of today's biomedical advances, and four of the world's top 10 universities for preclinical, clinical and health sciences.

For more than eight centuries, the UK has been a powerhouse of scientific innovation. Academic institutions such as UCL, King's College London and the Universities of Oxford and Cambridge have long histories, some predating even the UK itself. They have survived world wars and shifting alliances of political blocs. The combination of knowledge, innovation and collaboration that has sustained these institutions forms a constant and unrivalled foundation for the life sciences community.

The value of estimated inward life sciences foreign direct investment (FDI) in the UK was £1.9bn in 2021, coming behind only the USA in terms of value. 2021 marked a second year of substantial increase in FDI in the UK since 2019, when the value was £574m. The UK life science industry raised £7.0bn in equity finance in 2021, this has substantially increased compared to 2012 when £0.5bn was raised, a twelvefold increase. In 2021. the UK life science industry was placed third compared to comparators in terms of equity raised, behind only the USA and China. The UK accounts for a high share of medical science academic citations at 13.2% in 2020. again behind only the USA and China.

The UK remains Europe's leading life sciences hub and is in the top 3 global life sciences clusters. We have the strongest preclinical and clinical pipeline in Europe and lead in health and life sciences inward investment. The UK had the sixth highest number of life science initial public offerings (IPOs) and associated capital raised in 2021. Initial Public Offerings (IPO) from the listing of life science companies in the UK raised £751m in 2021, ranking the UK fifth amongst comparator countries.

The Government's Industrial Strategy has committed to increase public investment in R&D to 2.4% of GDP by 2027 and 3% over the longer term – delivering an estimated increase of £80 billion over the next 10 years. In 2020, the UK government's budget for health R&D was £2.7bn, which equated to 0.12% as a percentage of GDP. This ranked the UK third out of all comparator countries, in terms of the proportion of GDP, behind only the USA and Japan. Bold scientific innovation exists in the UK, including the UK Biobank, the 100,000 genomes project and the Francis Crick Institute. **((**For more than eight centuries, the UK has been a powerhouse of scientific innovation. Academic institutions such as UCL, King's College London and the Universities of Oxford and Cambridge have long histories, some predating even the UK itself. **))** 

Finally, our deeply valued National Health Service (NHS) is the world's largest integrated health system, treating more than 1 million patients each day. In addition to the opportunity to leverage the NHS as a platform to launch new products, it is also a partner for research with a well-funded national infrastructure for clinical trials and unparalleled data resources. The UK plays a major contribution to global public health agendas, taking a lead in tackling policy and practical challenges in areas such as antimicrobial resistance, dementia, and neglected and tropical diseases.

With world class health technology assessment through the National Institute for Health and Care Excellence (NICE), more than 90% of the world's biologic reference standards produced through the National Institute for Biological Standards and Control, and a pragmatic and supportive regulator through the Medicines and Healthcare products Regulatory Agency (MHRA), the evidence and support you can access in the UK will open up routes to new markets.







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MedCity is the life sciences cluster organisation for London. MedCity fosters collaborations between biotech, medtech and pharma companies and the capital's life sciences ecosystem to supercharge innovation, drive inward investment and build skills and talent across the sector in the UK.

Working in close partnership with London's world-leading universities and national ecosystem stakeholders, MedCity creates powerful networks and partnerships to fast-track R&D, with a specialist focus on diagnostics and cell and gene therapy.

As life science experts, MedCity also facilitates the development of life science space in

London to support the growth of researchintensive businesses.

#### **Our services**

We can help international companies find or develop lab space, connect with commercial, R&D and investment partners, and navigate the UK ecosystem. MedCity is also authorised by the UK Home Office to endorse innovator visas for overseas applicants. Life science companies are welcome to join our growing MedCity Community, an online platform where founders can network, receive 1:1 advice, and attend regular events with ecosystem experts.



### Specialist areas

Advanced therapies: Working closely with London Advanced Therapies — a network of leading academic scientists in cell and gene therapy — we help industry find research collaborators across London's institutions and support early-stage companies to progress commercialisation. We also work with the UK Cell and Gene Therapy Catapult to support access for start-ups to manufacturing space and expertise for ATMPs.

Diagnostics: The MedCity Diagnostics Growth Hub (DGH) is a unique collaboration led by MedCity, in partnership with NIHR London Medtech and In-Vitro Diagnostics Co-operative (MIC) and a consortium of institutions expert in evidence generation, evaluation and support of diagnostic development.

MedCity Diagnostics Growth Hub is a 'one stop shop' for diagnostics and medtech companies to access all the support they need to flourish, from collaboration for early research to evaluation for later-stages. The Hub simplifies the complex pathway for new diagnostics R&D and commercialisation.





## **Barts Life Sciences**

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### **Cancer Research Horizons**

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Professor Rakesh Uppal Director rakesh.uppal1@nhs.net

Barts Life Sciences is a partnership between Barts Health NHS Trust, one of the largest in the UK, and Queen Mary University of London, a globally renowned research university, bringing together world-leading researchers, scientists, clinicians and industry to collaborate and accelerate the latest healthcare innovations from bench to bedside. Together, we serve a diverse community of 2.5 million people across east London with a disproportionate burden of disease that offers a research window on the world.

Our ambition at Barts Life Sciences is to transform health, life expectancy and opportunity for our community in a new life sciences campus at Whitechapel. One million square feet of vital space will be created for innovative healthcare solutions that can be translated directly into patient benefit at Barts Health hospitals and to generate investment in the local economy.

Dr Sven Bunn

Barts Life Sciences

**Programme Director** 

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Queen Mary and Barts Health have a strong and long-standing partnership that has a track-record of delivering life-changing health outcomes, including for communities that are often under-represented in healthcare research and delivery, and education.

Interested in finding out more and meeting our Life Sciences team? Please contact: Sven Bunn Barts Life Sciences Programme Director sven.bunn@bartslifesciences.org or visit: www.bartslifesciences.org

Queen Mary Uterstand



Dr George Tzircotis Partnerships Lead george.tzircotis@cancer.org.uk

Cancer Research UK (CRUK) is the world's largest charitable funder of cancer research and has exclusive rights to all IP arising from its >\$500M in annual funding. Olaparib, abiraterone, rucaparib and temozolomide are just some of the successful therapies developed through CRUK's scientific and clinical networks.

CRUK's powerful innovation engine, Cancer Research Horizons, supports the development and commercialisation of exciting discoveries and innovations developed through CRUK funding. We offer opportunities for licensing, collaboration and co-development across a broad spectrum of oncology research and development initiatives. Our focus is on maximising the translation of cancer research for the benefit of patients. We facilitate the discovery and development of new cancer therapeutics, vaccines, diagnostics and enabling technologies by linking commercial partners with worldleading scientists and clinicians. Our Centre for Drug Development is CRUK's centre of excellence for early phase clinical trials. The CDD collaborates with leading pharmaceutical and biotechnology companies under a shared risk reward model to accelerate the clinical development of promising oncology agents with the aim of increasing the number of novel agents available to patients. With a focus on first-in-class agents and first-inhuman studies, CDD's portfolio rivals that of a medium-sized pharmaceutical company in size, with 15 projects currently in active development.





**King's College London** 

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King's College London (King's) has an outstanding reputation for world-class teaching and cutting-edge, world-leading research, one of the top 10 universities in Europe (QS World University Rankings, 2020/21) and among the oldest in England.

King's comprises some 8,500 staff working across five campuses in the heart of London: a location which allows us to form and lead international conversations.

King's is part of King's Health Partners (KHP) an Academic Health Sciences Centre bringing together world-class research, education, and clinical practice for the benefit of patients in partnership with the three renowned NHS Foundation Trusts of Guy's and St Thomas', King's College Hospital and South London and Maudsley. KHP serves a patient population of over 8 million and have around 600 clinical trials running at any one time (see www.kingshealthpartners.org).

Dr Rachel Parker

Programme Manager:

Industry Partnerships

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King's proven track record in engaging with industry via research collaborations, knowledge transfer and consultancy services, underpinned by King's extensive research base, has created a broad portfolio of technologies and opportunities in healthcare (including diagnostics, therapeutics and medical devices), with many of these spun out or licensed to industry to create real world impact.





## **Northern Health Science Alliance**

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Helen Cole Industry Partnerships Manager helen.cole@thenhsa.co.uk

The Northern Health Science Alliance is the North of England's health partnership, across a population of 16 million people, bringing together ten universities, ten researchintensive National Health Service (NHS) Trusts and four Academic Health Science Networks.

We are at BioJapan, as part of the UK delegation, to seek opportunities for research collaborations for our member organisations. We also offer support for Japanese companies to co-develop your innovative technologies for potential NHS adoption.

Our mission is to unlock the combined potential of the North's health research and innovation assets for the benefit of the people and the economy. Our vision is one of a healthy and prosperous North, powered by excellence in research and innovation across healthcare and academia with industry engagement and citizen involvement as key drivers. In partnership with MedCity, the NHSA can potentially help you with:

- Introductions to UK clinical and academic institutions for collaborative research and development, and evaluation of your technology
- Engaging with healthcare innovation support systems in the UK
- Finding a UK mentor and navigator

### We invite you to:

- Engage with us early in your product development
- Think partnerships, not sales
- Get a UK presence to build trust and unlock access to more opportunities.



#### NIHR National Institute for Health and Care Research



### National Institute for Health and Care Research

♥@NIHR\_Industry nihr.ac.uk/industry



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The NIHR is the most integrated health research system in the world, designed to transform scientific breakthroughs into lifesaving treatments and technologies. We work in partnership with SMEs, life science companies and CROs to design and deliver research within the UK's health and social care environment. The NIHR can support companies to generate the required clinical and economic evidence to progress the development of their new therapeutics, medical devices, diagnostics and digital products to market. From early stage, translational research through to later stage clinical trials, a full range of free support is available.

### We offer:

- Access to world-leading academic and clinical expertise, collaborations and partnerships.
- Support to rapidly determine if your study is compatible with UK clinical practice.
- Help to effectively and efficiently plan, place and perform your research.
- Support in accessing funding, data and clinical samples.
- Help to engage patients to improve your study design and optimise recruitment and retention.
- Assistance to help you navigate the UK health and research system.



### Precision Health Technologies Accelerator

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The Precision Health Technologies Accelerator (PHTA) is a business innovation facility that will soon occupy the top three floors of No.1 BHIC – the flagship building of the ambitious Birmingham Health Innovation Campus which is being delivered in partnership with Bruntwood SciTech and was funded in part by GBSLEP. Providing approximately 70,000 square feet of state-of-the-art incubation and collaboration space, PHTA is a catalyst for health and life science businesses to succeed.

PHTA will be dedicated to the rapid development and translation of innovative therapies and technologies from concept to clinical evaluation. By creating new opportunities for businesses and entrepreneurs to innovate and grow, and for clinical-academics in the region to commercialise their ideas, it will accelerate our ambition to be a research and innovation leader in health and life sciences. The PHTA builds on Birmingham Health Partners' nationally-recognised strengths and will support businesses through access to expertise in:

- The development and delivery of complex clinical trials
- Complex diagnostics, multi-omics analysis and heath data
- Device evaluation and testing
- Regulatory science and innovation









## **Richmond Pharmacology**

Section 2017 Contract Section 2017 Contract



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Dr Ulrike Lorch Chief Medical Director u.lorch@richmondpharmacology.com



Richmond Pharmacology is a dedicated clinical research organisation based in the heart of London, United Kingdom. Founded in 2001, Richmond Pharmacology delivers clinical excellence from design to delivery of early to late phase clinical trials, going from strength to strength in a fiercely competitive marketplace. Our current research facility is the fourth clinical research unit we will have designed and operated, and its blueprint is the result of over 20 years expertise in running clinical research. It combines the long-standing tradition of the site with our working practices to match the needs and expectations of innovative sponsors.

As a research organisation run by healthcare professionals, Richmond Pharmacology makes a meaningful contribution towards bringing new medicines to market. We interact with healthy research volunteers, patients, clinical



and academic specialists in their respective fields, to ensure our research meets the highest regulatory, scientific, quality and ethical standards. We are personable, flexible, adaptive to change to meet clients' expectations and transparent in the process.

We specialise in first-in-human studies and adaptive clinical trials and according to recent estimate conduct approximately 20% of the overall number of Phase I studies in the UK. The first patient in the first ever in vivo CRISPR-cas9 FIH study was treated by us. We are one of the leaders in advanced therapy studies. Our clients are international with trial sponsors coming from around the world, especially the European, US, and Japanese markets. Trial sponsors are also attracted by our excellent access to healthy volunteers and patients – for example, our volunteer database exceeds 280,000 individuals from a broad demographic spectrum. To date we have conducted over 500 Early Phase Studies.

Our experienced Japanese team accounts for 20% of our workforce and our London location provides access to one of the largest concentrations of first-generation Asia-Pacific populations outside of their countries, including Japanese, Chinese, Korean and other Asian populations giving us a recruitment database with more than 13,000 active 1st generation Japanese subjects, the largest in Europe.





## University College London

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UCL was founded in 1826. We were the first English university established after Oxford and Cambridge, the first to open up university education to those previously excluded from it, and the first to provide systematic teaching of medicine. We are among the world's top universities, as reflected by performance in a range of international rankings and tables.

UCL Translational Research Office (TRO) provide practical support to researchers across the university. From project management and translational funding support to initiating strategic collaborations both internally and with industry partners, the TRO's passion, skills and experience are applied to accelerate patient access to medical innovation. UCL Business Ltd (UCLB) is the commercialisation company for UCL, working with UCL's world-renowned faculties and associated hospitals, it brings together exceptional ideas, innovations and industry to benefit society and the economy. UCLB's track record of success includes over £1.5 billion raised in investment for UCL spinouts, and Portico Ventures is enabling the next wave of technology-based businesses to thrive in a fast-moving ecosystem.





### **Notes**







## **Contact us**

Please get in touch to find out how we can help you grow your business in London and the UK, including:

- University/NHS research collaborations
- Evidence generation & regulatory guidance
- Commercialisation expertise
- Investment
- Finding lab space
- Community networking
- Innovator visas

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