



Building the world's most complete advanced therapies ecosystem

Annual Review 2018

www.ct.catapult.org.uk/annualreviews



CATAPULT
Cell and Gene Therapy

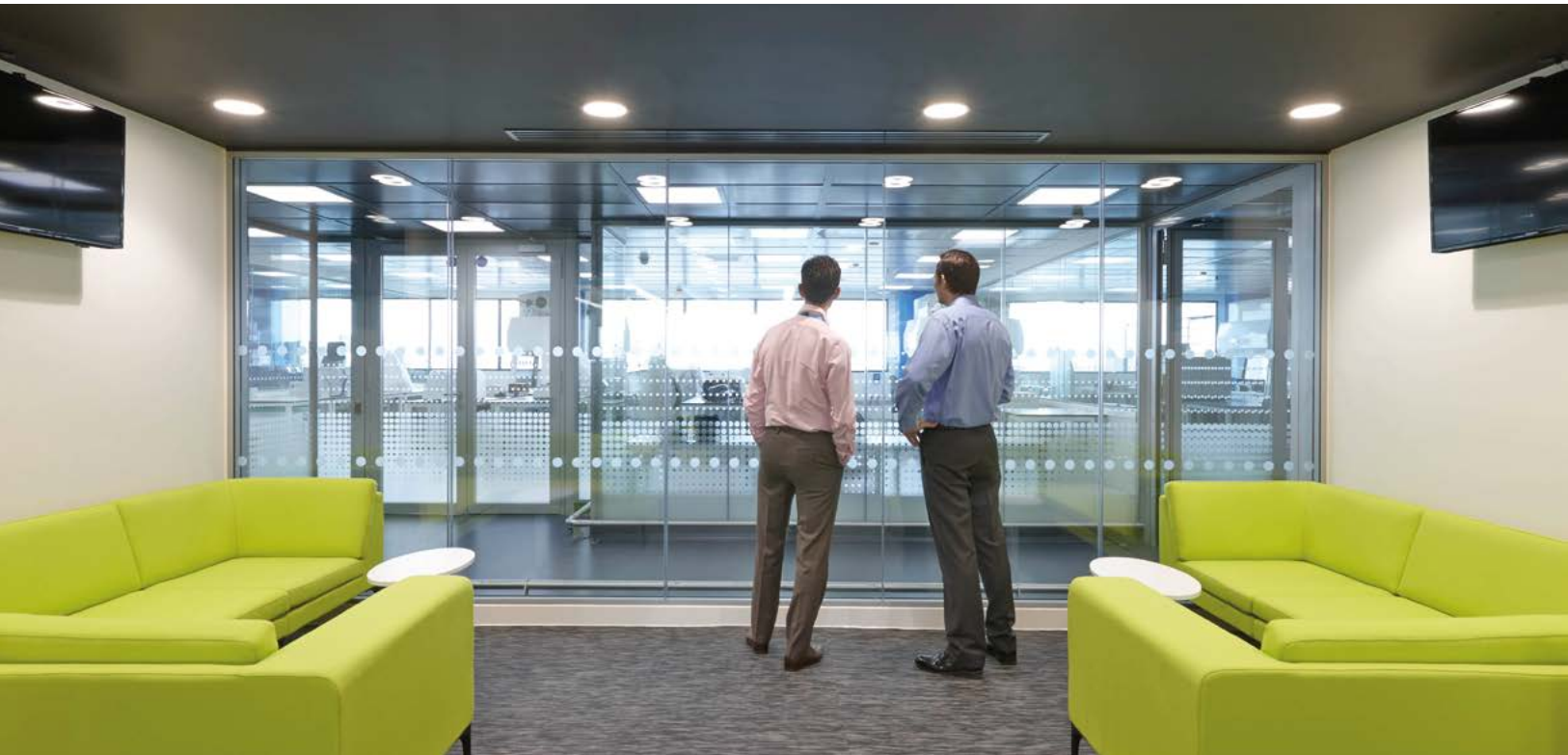
The Cell and Gene Therapy Catapult (CGT Catapult) was established in 2012 to grow the UK cell and gene therapy industry, to deliver health and wealth. We are part of a network of Catapult centres supporting the implementation of the UK Government’s Industrial Strategy, bridging the gap between scientific research and full-scale commercialisation.

Our vision

Our vision is for the UK to be a global leader in the development, delivery and commercialisation of cell and gene therapies; where businesses can start, grow and confidently develop advanced therapies, delivering them to patients rapidly, efficiently and effectively.

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Our objectives

- 1 **Accelerate** the commercialisation of innovations from research
- 2 **Complement** industry and academia with **unique technical facilities and expertise**
- 3 **Innovate** in collaboration with the academic and industry network
- 4 **Facilitate** the growth of the UK ecosystem; working with industry, government, the NHS and international regulators

£10bn

There is the potential for a £10bn industry with 18,000 jobs by 2035.

Our capabilities

People

170+

Our team is made up of over 170 cell and gene therapy specialists with expertise in:

- Industrialisation
 - Analytical development
 - Process development
 - Manufacturing development
- Manufacturing
- Regulatory
- Clinical operations
- Non-clinical safety
- Health economics and market access

Development labs



Analytical characterisation and process development laboratory space

1,200m² state-of-the-art laboratories located in Guy's Hospital, London, equipped with a unique Good Manufacturing Practice (GMP) proving lab.

Viral vector industrialisation laboratory space

Viral vector laboratory allows us to investigate the availability, cost and scale of viral vectors, reducing this barrier for the industry.

Manufacturing centre



Cell and Gene Therapy Catapult manufacturing centre

Large-scale GMP manufacturing centre enables companies to develop and implement their manufacturing processes.

Our impact

An independent review found that, despite their recent creation, there was evidence Catapults may have already had economic impact and that this was *“especially the case for ... CGT Catapult, where they have centred delivery plans to drive economic benefit to the UK”*.

The EY Review of the Catapult Network 2017



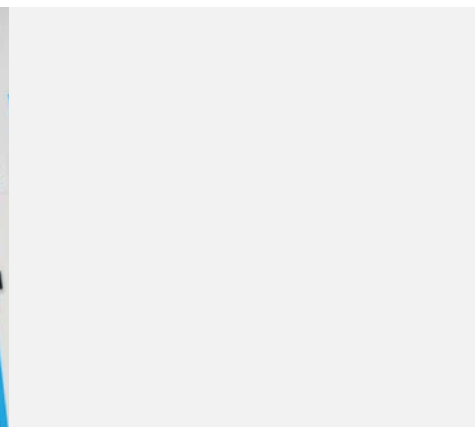
April 2018

Business Secretary Greg Clark and Science Minister Sam Gyimah opened the CGT Catapult manufacturing centre in Stevenage.



This unique new centre will bring together our expertise in medicines manufacturing with our world-beating science and research base to create revolutionary treatments that fight diseases like cancer and save lives.

Rt Hon Greg Clark MP, Secretary of State for Business, Energy and Industrial Strategy



Official opening of CGT Catapult manufacturing centre

- 1 Business Secretary Greg Clark and Science Minister Sam Gyimah were given a tour of the CGT Catapult manufacturing centre in Stevenage and were shown first-hand the level of cooperation in the industry and how this has benefited our collaborators.
- 2 The ministers officially opened the manufacturing centre in front of over 120 guests from across the industry.

80 projects

Over the last 12 months CGT Catapult has worked on 80 projects from clinical operations and health economics, to manufacturing industrialisation and analytical development.

8

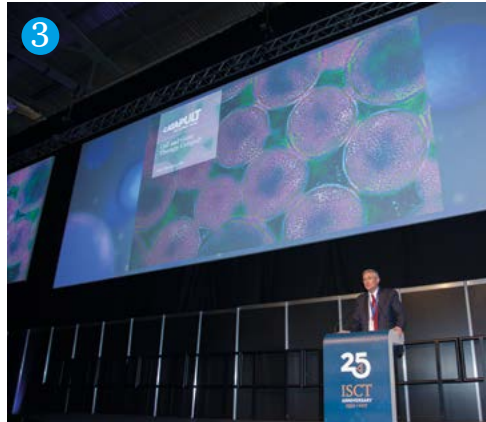
of the UK SMEs we have collaborated closely with have raised in excess of **£485m** of investment, much of which will be invested in the UK

11

international companies that we have worked with have announced significant investments in the UK



3



Focusing global attention on the UK

Representatives from CGT Catapult championed the UK industry to the global audience at the ISCT Annual Conference, with Matthew Durdy, Chief Business Officer, and Dr Stephen Ward, Chief Operating Officer, addressing both commercial and manufacturing challenges.



7

companies that, prior to the CGT Catapult, may have located elsewhere are developing their manufacturing strategies in the UK

The UK's advanced therapies ecosystem is flourishing and the UK is fast becoming the go-to place for cell and gene therapy development.



Dr John Brown CBE,
Chairman

Over the last five years, the pace at which the global industry has moved forward continues to accelerate, with the first two commercially available CAR T-cell therapy products – Novartis's Kymriah and Kite/Gilead's Yescarta – approved in the US and Europe, and there are a number of therapies in clinical trial that are also expected to reach the market.

The UK's advanced therapies ecosystem is flourishing. The UK is fast becoming the go-to place for cell and gene therapy development; with government support, innovation agencies, regulators, contract manufacturing and development and a number of academics, SMEs, large pharma and supply chain companies, a growing manufacturing and development cluster and the only coordinated network of Advanced Therapies Treatment Centres (ATTCs), it is the most complete and integrated ecosystem in the world.

The success of this ecosystem is evidenced by companies such as Oxford BioMedica, who are manufacturing lentiviral vectors, Autolus, Adaptimmune and Freeline who have a number of advanced therapy candidates, and Cobra Biologics who are rapidly expanding their gene therapy manufacturing operations.

On behalf of the Board we would like to thank the whole of the CGT Catapult team, as well as our industry, academic and government partners. Without each of you, the UK industry would not be where it is today.

A handwritten signature in dark ink, reading "John Brown". The signature is fluid and cursive, with a long horizontal stroke at the end.



A key part of the UK ecosystem is the manufacturing and development cluster in Stevenage.

We were delighted that a panel of industry representatives recognised the impact that CGT Catapult has had and unanimously endorsed our plans for the next five years.



Keith Thompson,
Chief Executive Officer

170+

cell and gene therapy experts

April 2018

The CGT Catapult manufacturing centre was opened

CGT Catapult is now well established, and we have developed a range of unique assets across our development laboratories in London and the manufacturing centre in Stevenage to support the growth of UK industry. We now have a team of over 170 cell and gene therapy experts working on projects varying from manufacturing technologies to reimbursement. We have grouped our work into a series of strategic priorities, which are reflected in this document:

- **Supply chain** – developing manufacturing and supply at scale
- **Intelligent manufacturing** – increasing productivity and reducing cost with new technologies
- **Gene delivery systems** – focusing on challenges in viral vector production and next generation gene delivery technologies
- **Commercialisation of research** – advancing the flow of new technologies from the UK's academic sector
- **Regulatory advantage** – facilitating a competitive UK regulatory framework
- **Proof of adoption** – enabling widespread clinical adoption and reimbursement

One of the biggest milestones reached by CGT Catapult over the last year was the official opening of the CGT Catapult manufacturing centre. It was great to celebrate the opening of the centre with Business Secretary Greg Clark and Science Minister Sam Gyimah. Thanks to the hard work of the CGT Catapult teams based at the centre in Stevenage, our initial collaborators can now develop the manufacturing technologies of the future, cementing the industry in the UK.

As part of the five-year renewal process, we were delighted that a panel of industry representatives recognised the impact that CGT Catapult has had and unanimously endorsed our plans for the next five years. We will work with UK Research and Innovation to ensure the impact of our activity is maximised and that the UK is the go-to place for cell and gene therapies to be developed at scale.

A stylized, handwritten signature in dark ink, consisting of several fluid, connected strokes.

State of the industry

The global cell and gene therapy industry is flourishing and the UK is fast becoming the go-to place for cell and gene therapy development.

Global

854+

advanced therapy companies
worldwide

2

commercially available CAR T-cell
therapies approved in the US

946

clinical trials were underway
worldwide, as of the end of 2017

Europe

234+

advanced therapy companies
in Europe

\$1.5bn

was raised by European cell and
gene therapy companies in 2017

200

clinical trials were underway in
Europe, as of the end of 2017

64

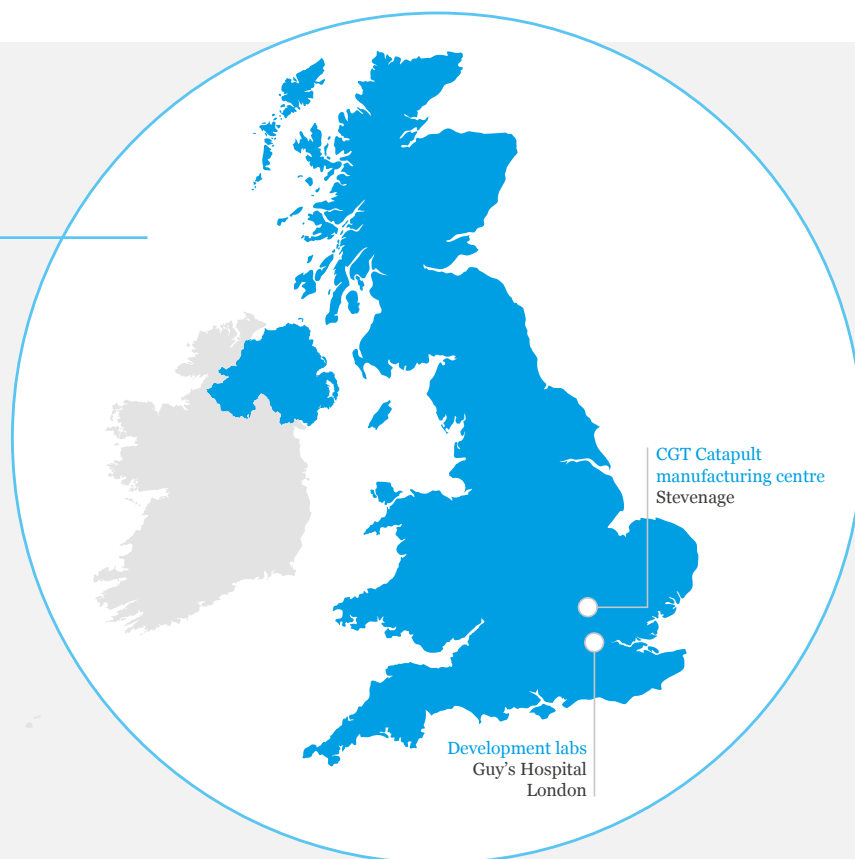
advanced therapy developers – more than any other European country

£1.6bn

in funding has been raised by UK companies since 2013

1,500+

jobs in the UK cell and gene therapy industry



The UK is a global leader:

In clinical development:

- Autolus' CAR T-cell therapy showed early signs of clinical activity in solid tumours

In regulatory development:

- Orchard Therapeutics OTL-101 received Promising Innovative Medicine designation by the MHRA

In reimbursement:

- NICE recommended NHS funding for GSK's Strimvelis to treat children with ADA-SCID

In investment:

- Adaptimmune Therapeutics announced \$61.8 million investment following a public offering

In partnering:

- Oxford BioMedica signed an agreement with Novartis for the supply of lentiviral vectors

In research:

- Doctors at Moorfields took a major step towards curing age-related macular degeneration, seeing positive results during clinical trial

Supply chain

The CGT Catapult manufacturing centre is a unique asset and key in our vision to make the UK a global leader in the development, manufacture and commercialisation of cell and gene therapies.



Dr Stephen Ward
Chief Operating Officer

CGT Catapult manufacturing centre



James Biggins
Manufacturing
Centre Director



Jon Halling
Director of Quality

£60m

of government investment has been put into the centre



The centre provides the infrastructure to develop manufacturing capability and systems for large-scale cell and gene therapy clinical studies.

Following an initial £55m investment, CGT Catapult was awarded a further £12m from the Industrial Strategy Challenge Fund to double the current capacity of the centre in Stevenage. Construction of the further six modules is expected to be completed in 2019.

Unique operating model

The centre is focused around architecturally independent modules in which collaborators can access the capabilities needed to develop their proprietary manufacturing platforms in an environment suitable for clinical supply and full scale commercialisation.

Our collaborators



Adaptimmune

Vector manufacturing is one crucial element of Adaptimmune's integrated manufacturing process. This project with CGT Catapult will enable them to have their own dedicated vector manufacturing capability in the UK.

Autolus

Autolus have developed their own proprietary viral vector and semi-automated cell manufacturing processes. The CGT Catapult manufacturing centre is allowing Autolus to grow their manufacturing capacity as well as access a range of services provided at the centre.

Cell Medica

The CGT Catapult manufacturing centre is enabling Cell Medica to establish their cell therapy manufacturing and have more control over their manufacturing activities, working in a purpose-built, cost-effective, collaborative facility.

Freeline Therapeutics

Freeline Therapeutics are collaborating at the CGT Catapult manufacturing centre to further develop proprietary viral vector manufacturing technology. The CGT Catapult manufacturing centre will ensure rapid and secure manufacturing of these vectors.



With our own vector manufacturing capability at the CGT Catapult facility, we will extend vector supply capacity beyond 2020.

James Noble, CEO, Adaptimmune



We are delighted to establish this collaboration for our next-generation AAV gene therapy platform for chronic systemic disease.

Jan Thirkettle, Chief Development Officer, Freeline Therapeutics

Supply chain

CGT Catapult is actively facilitating the growth of the manufacturing and development cluster in the area surrounding the manufacturing centre.



Establishing a robust needle-to-needle logistics chain

CGT Catapult have partnered with TrakCel to incorporate its needle-to-needle supply chain management platform into CGT Catapult's large-scale cell and gene therapy manufacturing centre. This will provide a single, real-time solution and full traceability throughout the therapy development life cycle.



This partnership will deliver the most technologically advanced and secure end-to-end supply chain in the world.

Ravi Nalliah, CEO, TrakCel



Addressing the challenges around supply chain management

To help address the challenges surrounding supply chain management for cell and gene therapies around the globe, Thermo Fisher Scientific is collaborating with CGT Catapult, building a dedicated storage and logistics facility co-located with the CGT Catapult manufacturing centre.

Combining the two offers centralised manufacturing, storage, distribution and logistics, resulting in a seamless supply chain.



Identifying the infrastructure required for our collaborators' success

We have worked with Cranfield University to generate a dynamic simulation model of the infrastructure required for ATMP manufacture. The model will allow us to identify the optimum solution for the industry when scaling-up the supply chain.

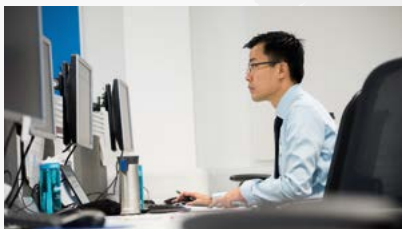
This increased understanding allows us to provide efficient systems and resources for our collaborators at the Stevenage manufacturing centre.

Importance of location

There are over a dozen cell therapy, gene therapy and supply chain companies at the Stevenage cluster, employing over 350 people.

- Achilles Therapeutics
- Adaptimmune
- Aglaris Ltd
- Autolus
- Cell Medica
- Fisher BioServices
- Freeline Therapeutics

- GSK
- Gyroscope
- LIFT BioSciences
- Plasticell
- Puridify
- TrakCel



Addressing skills needs

Funding secured:

£1.5m

to develop apprenticeships in advanced therapies manufacturing in partnership with the Medicines Manufacturing Industry Partnership

£1.5m

for capability development through the network of Advanced Therapy Treatment Centres



Stevenage

- Transport links
- Key talent
- Existence of cluster



Key to widespread adoption of cell and gene therapies is the unique skills and capability set required to manufacture, supply and administer these important medicines to patients.

Keith Thompson, CEO, Cell and Gene Therapy Catapult



Intelligent manufacturing

Scale, cost and productivity gains still need to be achieved if the UK's advanced therapy ecosystem is to operate at the large scale required for regular supply.



Dr Damian Marshall
Director of Industrialisation,
New and Enabling
Technologies

Using innovative techniques to improve the consistency of cell therapy manufacture

Analytical techniques can be used to control the manufacturing process through the measurement of critical quality and performance attributes. However, current technologies often involve the removal of a sample from the process stream and are only performed at a limited number of time points during the manufacturing process.

The analytical development team at CGT Catapult have been using Raman spectroscopy to monitor changes during the bioprocessing of cell therapies. Having the ability to monitor markers in real time using in-line sensors offers significant advantages, allowing faster decision making and a finer level of process control.

Increasing the efficiency of T-cell expansion using adaptive processing technology

Bioreactors are devices used to culture cells in the large numbers needed to treat disease. Knowing how to support healthy growth of the cells during this expansion process is a challenge for developers.

The Stratophase Ranger™ technology monitors relative changes in the bioreactor culture medium in real time, determining the needs of the cells based on their metabolic activity. CGT Catapult have characterised the tool for the expansion of T-cells and compared different expansion strategies to optimise the process.





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We are developing innovative technologies, processes and automated systems to increase productivity and reduce cost of goods.

Developing large-scale bioprocessing strategies for allogenic cell therapies

Induced pluripotent stem cells (iPSCs) have the capacity to become any type of cell in the human body and hold great promise for the development of allogenic cell therapies, which can be manufactured in advance in large batches for off-the-shelf treatments.

The team at CGT Catapult have scaled the expansion of an iPS cell line in 2D culture in the Quantum® hollow-fibre bioreactor, reducing labour requirement, cost of goods and increasing cell yield.

2D culture has limited scalability, and a transition from 2D to 3D can reduce the cost of goods further and enable supply of therapies that require large cell numbers. The team has scaled up the expansion of both ESC and iPSC lines in 3D, whilst maintaining their phenotype and differentiation potential.

Intelligent manufacturing



Using digital technology to fulfil unmet industry needs in sterility testing

CGT Catapult, working with GSK and LGC, are developing a rapid sterility test using digital droplet polymerase chain reaction (PCR) that can detect up to 97% of bacterial and fungal species in approximately six hours.

This method, which is designed for in-process and final product release testing, can detect microbial contamination in a background of 20 million human cells per ml. To allow this, the team developed a novel method for specifically removing human and other free DNA from the test sample.

37

We have worked on 37 commercial projects, using our assets to assist companies developing cell and gene therapies





Next-generation manufacturing will require the use of artificial intelligence

When looking to produce cost-effective therapies at the scale necessary to meet clinical demand, a revolutionary new approach is required. The use of artificial intelligence (AI) could ensure these products are accessible and affordable.

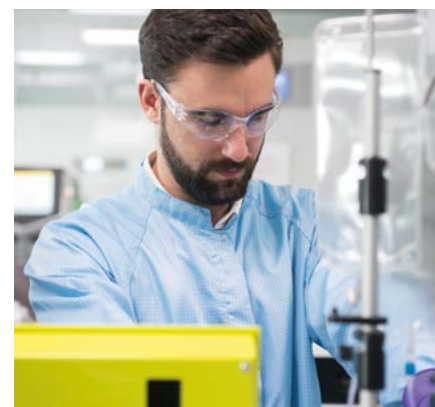
Proposed ways in which AI could revolutionise the industry include:

- Adaptive manufacture
- Machine learning
- Process automation
- Digitised quality systems



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We are conferring both technological and cost advantages to the UK industry and are reducing reliance upon labour intensive processes.



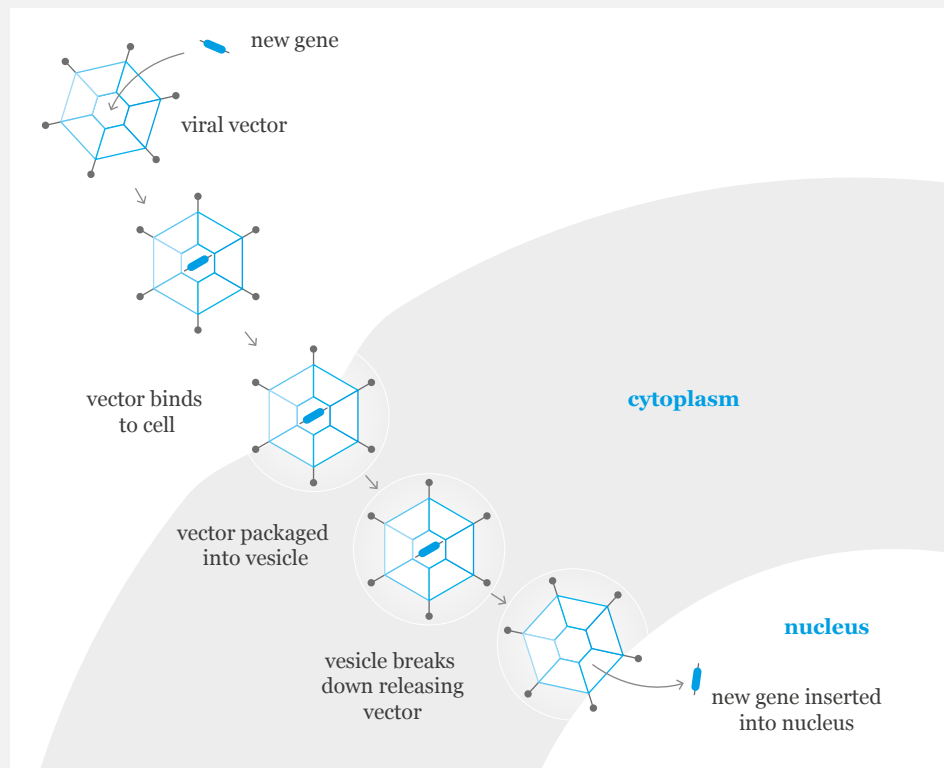
Gene delivery systems

The challenge of producing viral vectors at the required scale and cost to support late-phase clinical trials and commercial supply is hampering the application of therapies and places the global research pipeline and industry at risk.



Julie Kerby

Director of Industrialisation,
Manufacturing



Utilising experience from the biopharmaceutical industry to improve gene transduction

Many cell therapy products have at least one gene modification stage in their manufacture, which involves introducing genes into the cells via transduction.

We are currently working with GSK, Sphere Fluidics and Immetacyste Ltd (formerly Cellular Therapeutics), to automate this process of transduction and increase efficiency using microfluidic technology. This technology works by encapsulating one or more target cells together with a specific number of viruses in picolitre-volume droplets, thereby controlling the viral dosage and increasing the probability of successful transduction.



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We are working to industrialise new viral vector manufacturing processes to improve productivity.

Measuring viral vectors with increased accuracy using digital droplet PCR

When introducing genetic material into cells using viral vectors, it is necessary to quantify the amount of starting material to control the level of virus that is transduced into the cells. Currently, viral titre is measured using methods such as quantitative PCR. However, digital droplet PCR provides absolute quantification and increased resolution which is useful for process development purposes.

Digital droplet PCR can also be used to measure viral copy number, the number of viral genes that are integrated within the cells genome. This is used to characterise modified cell products, which is critical to the assessment of risk and therapeutic efficiency in patients.

Gene delivery systems

Increasing the productivity and quality of lentiviral vectors using process analytical technologies

There is an industry need to continue to increase productivity and quality during viral vector manufacture, in order to meet forecasted demand. Analytical techniques can be used to improve process knowledge and product characterisation, which consequently gives manufacturers more control and process improvements, thereby increasing productivity and quality.

We are working with Oxford BioMedica on their unique LentiVector® delivery platform to develop and refine strategies to control the growth environment and increase viral vector yield.



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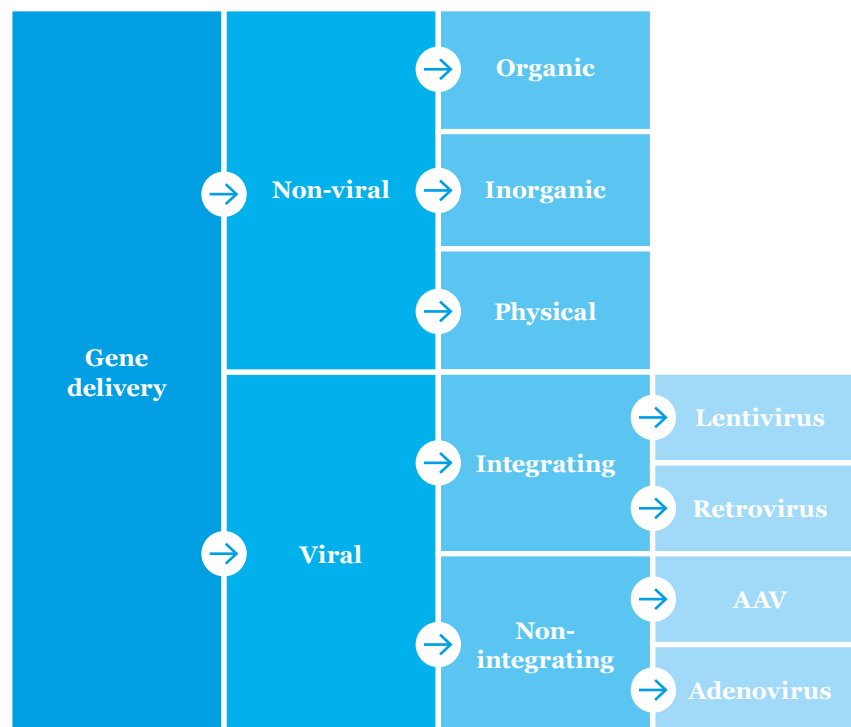
We are working with collaborators to industrialise new viral vector manufacturing processes.

Priming the industry for the disruptive gene delivery technologies of the future

In addition to viral vector manufacturing development, CGT Catapult is investing in the development of non-viral delivery systems. Such systems have the potential to offer:

- Scaled production with reduced batch variability
- Lower immunogenicity
- Higher packaging capacities
- Better safety profiles
- Lower cost than traditional viral vector delivery systems

Gene delivery technologies



Future challenges for CGT Catapult in priming the industry for non-viral gene delivery

- Development of a toolkit and benchmarking framework to assess the effectiveness of non-viral gene delivery systems.
- Development of disruptive non-viral gene delivery technologies to overcome some of the issues encountered with viral vectors.

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We are working with the research base to support the emergence of, and the development of, the next generation of non-viral gene delivery technologies.

Commercialisation of research

The challenge for the future growth of the industry is how to increase the flow of new technologies and people that will feed the industry.



Dr Michael Bennett

Director of Business
Development

Developing novel gene delivery technologies at the forefront of innovation

The CGT Catapult team are investigating the ability of the RALA protein in transfecting different cell types, monitoring delivery efficiency, viable cell yields and the stability of the transfected cells, which has shown positive results in early experiments.

RALA, a synthetic peptide invented at Queen's University Belfast and now exclusively licensed to spin out company Phion Therapeutics, was designed to transport and deliver nucleic acids and small molecules into cells and has shown efficiency in proof-of-concept studies.

If RALA and other non-viral gene delivery technologies are robust and translatable to a GMP environment, they could form future platform technologies for gene delivery in cell and gene therapy.

Supporting UK spin outs in moving therapeutic programmes to the clinic

CGT Catapult have worked with GammaDelta Therapeutics to support and accelerate their process development work, focused on optimisation of critical aspects of their protocols to enable higher yields and quality as they move towards the clinic.

GammaDelta Therapeutics is an immunotherapy company based on exploiting the potential of V δ 1 gamma delta ($\gamma\delta$) T-cells, a unique group of lymphocytes that play a critical role in tissue surveillance and the resulting immune response against cancers. GammaDelta Therapeutics was formed as a spin out from Kings College, London and the Crick Institute.



*We are assisting
GammaDelta Therapeutics
as they move towards
the clinic and
commercialisation.*





Disseminating knowledge on ensuring commercial success

We held a seminar event in February 2018 with the aim of helping the community understand how they can ensure commercial success for the development of their cell and gene therapies.

A wide spectrum of industry specialists joined us over three days where the CGT Catapult team and guest speakers offered their expertise to give an overarching view of the key considerations for ATMP developers at all stages of the development pathway.



I've found the last few days very interesting and it's been a real eye-opener for me hearing different industry perspectives.

Regulatory advantage

We are working alongside government, regulators and stakeholders to ensure that the UK regulatory framework enables safe and effective Advanced Therapy Medicinal Products (ATMPs) to be trialled and licensed rapidly in the UK.



Dr Jacqueline Barry
Chief Clinical Officer

Supporting the industry using our regulatory expertise and experience by:

- Helping build the UK towards accelerated clinical trial and licensing of ATMPs
- Engaging with and providing ongoing regulatory support to the ATMP industry to increase knowledge of the ATMP regulatory regime
- Promoting international harmonization and streamlined systems with an aim to gaining greater global access for UK ATMP developers





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We have used our expert ATMP regulatory knowledge to support companies through a number of meetings and procedures with regulatory authorities, including scientific advice meetings, paediatric investigation plan, and orphan drug applications and innovation meetings.

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scientific and regulatory advice procedures have been supported by CGT Catapult, assisting both SMEs and academic institutions

Proof of adoption

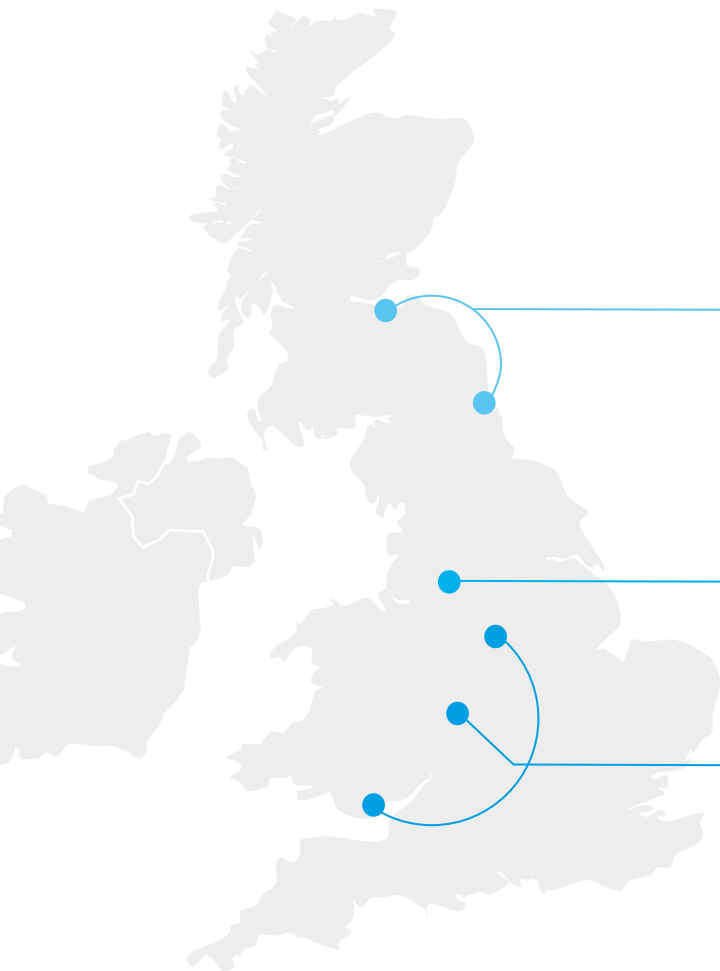
Following our early success in accelerating the clinical trial process, we are working to ensure that clinical adoption and reimbursement from healthcare systems is rapid, sustained and widespread.



Dr Jacqueline Barry
Chief Clinical Officer



Matthew Durdy
Chief Business Officer



Northern Alliance Advanced Therapy Treatment Centre objectives:



- Develop the clinical delivery pathway
- Use informatics to achieve utility at scale

iMATCH Advanced Therapy Treatment Centre objectives:



- Coordinate patient cell collection
- Design processing and storage solutions
- Test track-and-trace solutions
- Deliver specialist MRes pathway

Midlands & Wales Advanced Therapy Treatment Centre objectives:



- Develop end-to-end supply chain logistics
- Create a network of ATMP-capable hospitals
- Assess infrastructure for trial rollout
- Validate with real-world manufacturing and trials
- Build an economic model for ATMP use

Coordinating a network of Advanced Therapy Treatment Centres (ATTCs) to create a leading UK ecosystem

By coordinating the network of ATTCs, we aim to create routine clinical pathways for delivery of cell and gene therapy products.

The ATTCs and other specialists centres will develop systems to support the clinical supply, clinical adoption, data acquisition and reimbursement of cell and gene

therapies which will facilitate companies and NHS partners to quickly develop and demonstrate their offering, assisting expansion into international markets.

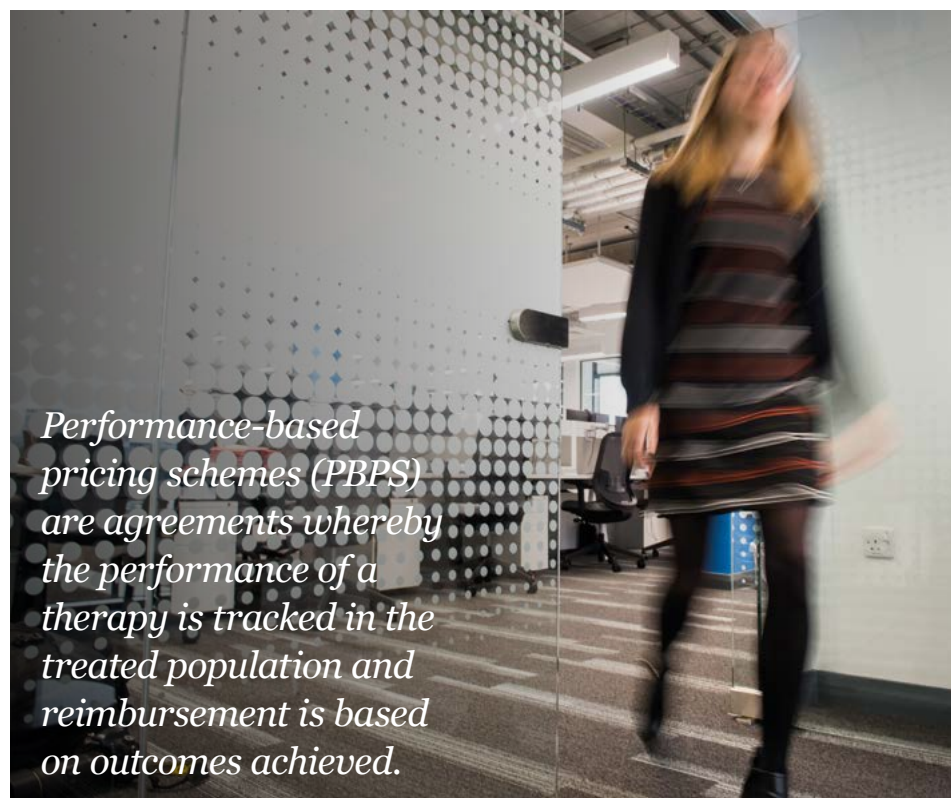
A total of £30m was awarded from the Industrial Strategy Challenge Fund to support the creation of the three centres.

£30m

was awarded from the Industrial Strategy Challenge Fund to support the creation of the three centres

3

expert centres for the delivery of advanced therapies will form the ATTC network



Performance-based pricing schemes (PBPS) are agreements whereby the performance of a therapy is tracked in the treated population and reimbursement is based on outcomes achieved.

Enabling the adoption of ATMPs by exploring novel pricing options

We have developed strategies that enable the adoption of performance-based pricing schemes, which can be used by companies and healthcare providers to explore this payment method.

The health economics and market access team examined the administrative burden associated with introducing PBPS using a hypothetical immunotherapy as an example. They also provided a methodological framework for pharmaceutical companies and health systems to utilise in order to explore the cost associated with setting up and implementing a PBPS.

Shaping and influencing

Our environment-shaping activities are aimed at continuously improving and creating an advantageous environment in the UK for therapeutic developers, supply chain and manufacturers.

Shaping the clinical and regulatory environment

- Engagement with international regulators including the Medicines and Healthcare products Regulatory Agency (MHRA), EMA etc
- Engagement with healthcare providers including the NHS, National Institute for Health Research (NIHR) and Biomedical Research Centres (BRCs)

Shaping the business environment

- Engagement with industry bodies to influence the outcome of activities
- Engagement with the risk capital industry to increase their understanding of cell and gene therapy making investment for companies easier
- Shaping the healthcare economics and reimbursement landscape by continuing to work with healthcare payers and commissioners to establish ways that these therapies can be adopted and reimbursed

Shaping the research environment

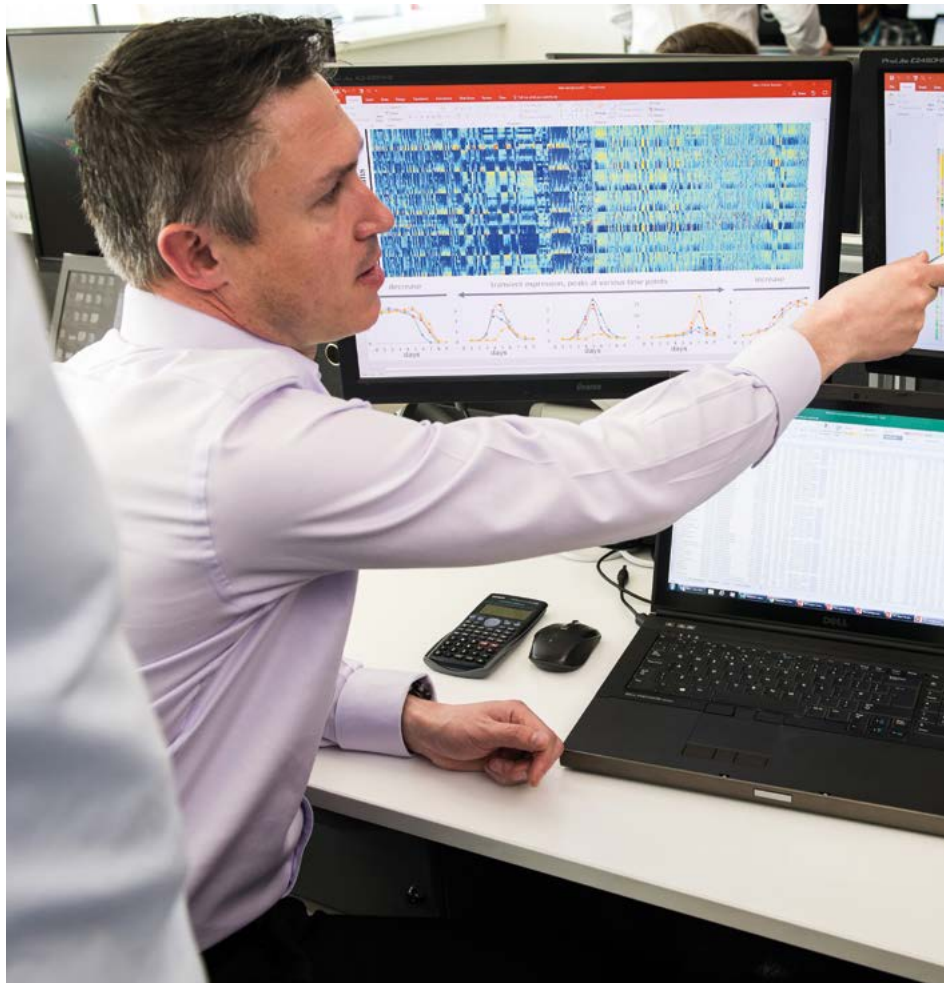
- Working with UK Regenerative Medicine Platform (UKRMP) hubs to build research agendas
- Interacting with both the academic research community and industry to align their needs
- Providing early expert guidance



Catapults are an important part of the Government's Industrial Strategy.

Looking forward to 2018/2019

The fast-paced nature of the cell and gene therapy industry means that we are already looking ahead to the next challenges and opportunities the industry will be facing.



We will address these challenges by utilising our existing assets in London and Stevenage and through our six strategic themes. Some key activities for CGT Catapult over the next 12 months include:

- Ensuring the UK cell and gene therapy ecosystem is viewed around the world as the best place to develop and manufacture cell and gene therapies
- Collaborators at the CGT Catapult manufacturing centre developing manufacturing capabilities and systems for large-scale cell and gene therapy clinical studies
- The network of Advanced Therapy Treatment Centres increasing patient access to cell and gene therapies on a national level



It is our vision to develop a complete cell and gene therapy ecosystem in the UK.

Financial highlights

The financial information in this review is extracted from the consolidated statutory accounts for the Cell Therapy Catapult Ltd for the year ended 31 March 2018.

Turnover

For the year ended 31 March 2018	2018 £'000's	2017 £'000's
Innovate UK core revenue grant funding	12,580	14,116
Collaborative research and development and other grant income	4,825	2,336
Commercial income	3,660	1,573
	21,065	18,025

Capital funding

For the year ended 31 March 2018	2018 £'000's	2017 £'000's
Innovate UK capital grant funding	5,851	24,931

Balance sheet

As at 31 March 2018	2018 £'000's	2017 £'000's
Fixed assets	44,341	40,019
Net current assets	2,704	4,124
Creditors amounts falling due greater than one year	(337)	(2,941)
Provisions for liabilities – deferred tax	(7,316)	(6,715)
Net assets	39,392	34,487
Capital and reserves	39,392	34,487

Cell and Gene Therapy Catapult is a trading name of Cell Therapy Catapult Limited (limited by guarantee), registered in England and Wales under company number 07964711 with registered office at 12th Floor Tower Wing, Guy's Hospital, Great Maze Pond, London SE1 9RT.

Corporate governance

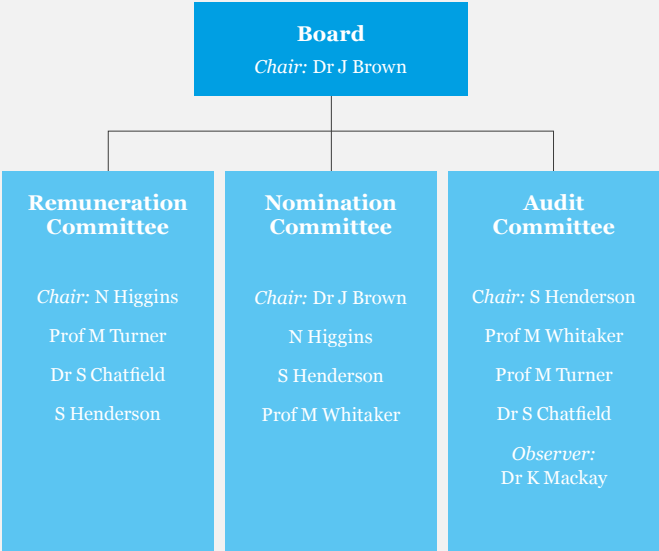
The Cell Therapy Catapult Ltd is an independent private company limited by guarantee incorporated as a not-for-profit research organisation. CGT Catapult receives substantial grants from Innovate UK and works in co-ordination with them while remaining independent.

Our Subsidiaries

- Cell Therapy Catapult Services Ltd
- Cell and Gene Therapy Catapult
- Chimeric Therapeutics Ltd
- Islexa Ltd

Our Committees as of April 2018

- We have established three committees that meet independently and make recommendations to the Board



Board of Directors

- Oversees the activities of the CGT Catapult
- Consists of up to 15 members, with the majority being independent non-executive directors, with complementary skills and expertise within the life science sector.
- Meets six times a year to guide and constructively challenge the CGT Catapult ensuring it is making maximum impact and delivering on its objectives
- Innovate UK has the right to appoint observers to attend Board meetings and certain committees (currently Dr K MacKay, Interim Director, Innovate UK)



N Higgins
Non-Executive
Director



Prof M Turner
Non-Executive
Director



Dr J Brown CBE
Chairman



Dr S Chatfield
Non-Executive
Director



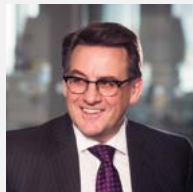
S Henderson
Non-Executive
Director



Prof M Whitaker
Non-Executive
Director



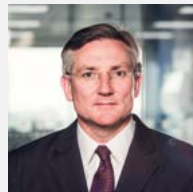
Dr S Ward
Chief Operating
Officer



K Thompson
Chief Executive
Officer



Dr J Barry
Chief Clinical
Officer



M Durdly
Chief Business
Officer

Our Advisory Panel

- Consists of academic and industry leaders with expertise across science, medicine and technologies
- Meets formally once a year and advises during the year
- Feeds recommendations into our strategy, positioning and planning

Dr J Thirkettle Freeline Therapeutics	M Hunt ReNeuron	Dr M Zimmerman Viacyte	G Sando Cell Medica	Dr E Hodgkin Syncona Partners	Dr R Fritsche- Danielson AstraZeneca	Prof Sir I Wilmut OBE FRS FRSE University of Edinburgh	Prof P Fairchild University of Oxford
Prof A Smith University of Cambridge	Prof C French- Constant University of Edinburgh	Prof M Peschanski I-Stem, France	Prof C Mason AVROBIO	Prof A Thrasher University College London	Prof G Lord King's College London	Prof P Reinke Charité – Universitäts- medizin, Berlin	M Westberg GE Healthcare Life Sciences

Thank you to the people we have worked with over the year, including:

Funders and investors



National and international organisations



National and international companies



National health services



Regulators



Researchers



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