

Building the UK ecosystem for the delivery of ATMPs

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Funded by







About us





Part of a **world-leading network** of technology and innovation centres



Provide access to unique technical **facilities** and **expertise** to help adopt, develop and exploit innovations



Bridge the gap between businesses and academic research



Established by Innovate UK as a **not-for-profit**, independent centre

It is our vision 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 these transformative therapies, delivering them to patients rapidly and effectively.

Summary



Accelerate	Complement		Innovate		Facilitate
the commercialisation of innovations from research	industry and academia with unique technical facilities and expertise		in collaboration with academia and industry		operating in UK as a global centre; working with Government, the NHS and international regulators
London		Stevenage		Braintree	
 1,200m² purpose built centre Analytical characterisation Process development Stem cell differentiation 10th floor collaboration laboratory Viral vector 		 7,700m² facility designed specifically for cell and gene therapy manufacturing at scale 12 segregated cleanroom modules At the centre of the third largest CGT cluster globally Expanded QC capacity & capability Secure collaborative model 		 4,627m² facility to support national COVID-19 vaccine manufacturing Fully operational by Dec 2021 to meet immediate vaccines demand To become innovation centre for CGTs & develop technology transfer innovation 	
<		Cell and gene therap	oy specialists (>300)		

Industrialisation

- Process development
- Analytical development
- Manufacturing systems
- Supply chain

Adoption

- Regulatory
- Non clinical safety
- Clinical delivery: Clinical Ops and ATTC Network
- Health economics & Market Access
- Programme management

Engagement

- Collaboration formation
- Intellectual property and patent







Department for Business, Energy & Industrial Strategy



TURN

Adoption - the potential and the challenges

TURAPULT

The Potential





Emily Whitehead aged 6 with ALL

The adoption challenge





The adoption challenge



Planning for many different products/indications

Cell based Immune-oncology Landscape

Gene Therapy Landscape



The adoption challenge: Scale up needed





Huge diversity in product types

Each product / batch / treatment is "unique".

Global, Regional and Local diversity in regulation, experience, infrastructure, management, funding mechanisms etc



UK advantage in the global ATMP landscape



Policy driven build of favourable environment in the UK





UK strength: investment, partnerships & commercialisation c





Data from ARM 2020 Annual Report Data from CGT Catapult 2020 clinical trials database commentary

UK ATMP Clinical Trials landscape





Ongoing ATMP trials in the UK by clinical Phase (2015-2020)



Data from CGT Catapult 2020 clinical trials database commentary

The rapidly growing UK cell and gene therapy industry









Developing the environment to enable companies to grow

12 modules, 8 collaborating companies operating



Autelus

Manufacturing viral vectors and cells for **programmed T cell therapies**



Manufacturing **neoantigentargeting T cell therapies**



Manufacturing ATMP products for clinical trials



Manufacturing T cell receptor therapies



Manufacturing viral vectors for T cell

therapies

Manufacturing **Treg cell therapies** for clinical trial

GMP cell processing for clinical trials



Manufacturing viral vectors for gene therapies





Stevenage Advanced Therapies Campus





Driven by the supportive UK ecosystem and developed around the Stevenage Advanced Therapies Campus and the CGT Catapult's Stevenage facility.

£1.66bn

total investment into the campus since 2013

£1.13bn

investment into CGT companies

31%

campus tenants are CGT companies (14/45)

CGT developers located at the CGT Catapult facility (out of 14 on campus)







Future proofing growth of the ATMP industry

Industry employment to double 2019-2024





Forecasted source of skills





Securing ATMP and vaccine manufacturing talent



Advanced Therapy Skills Programme Driven by industry, coordinated by CGT Catapult

Advanced Therapies Apprenticeship Community

Advanced Therapies Apprenticeship Communit

141 apprentices, 39 companies, 6 career pathways

Bringing in **new and diverse** talent for exciting careers in the industry **and upskilling** specialists in leadership, regulatory and digital roles.



Advanced Therapies Skills and Training Network



Online Training Platform

- >400 learning resources
- Multiple partners
- 74 companies engaged
- Technical & leadership
 resources
- Virtual reality technologies

GMP and cleanroom training

National Training Centres

- Partnerships across UK
- Manufacturing and technical resources
- Driven by industry need for

skills

· Immersive reality technologies

Career Converter

AT

Advanced There Skills Training N

- Attract talent from adjacent industries
- Identify and apply transferrable skills

Cell and Gene Skills clusters

Working with industry collaborators and local areas to develop training capability to meet the needs of the sector and local area





- 3-day training with University of Hertfordshire & industry
- Collaborator Training centre
- Engagement with FE curriculum





Enabling clinical adoption of ATMPs



ATTC network



- Fully developed and extremely successful network – world first in ATMPs
- Alignment with BRCs, CRFs and ARCs (translational and experimental medicine to adoption)
- **67 partners** true collaboration between NHS, industry and academia.
- 200 250 people working on the programme
- Collaboration with LAT (separately funded through Research England) with a commitment to have a London ATTC from 2022.



Aims

Using exemplar products to:

- Create easily-run and ready-to-use systems and solutions that can be rolled out more widely to the NHS
- Increase institutional readiness and patient access to licensed and investigational ATMPs
- Share learning across UK hospitals to accelerate adoption of ATMPs







Cell and Gene Therap





Industry Advisory Group

Objectives

To support and inform the ATTC programme

Develop the growing ATMP industry

Identify, discuss and propose solutions for issues affecting the growth of the ecosystem

Membership

Small biotech to multinational pharmaceutical companies

Supporting industries such as logistics specialists and CROs

Government bodies such as NHS England and MHRA

Achievements

Created a safe space for manufactures to meet and share experience

Involvement of NHS and regulators to have informal discussions and communicate issues

Continued growth including new partners

Focus

Working groups focussing on main challenges of ATMP industry. Agreeing standards for the future

- Sample
 procurement
- Labelling
- Logistics

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GMO streamlining

Contract standardisation





The NHS readiness toolkit provides resources for healthcare organisations that are working towards the delivery of advanced therapies for patients.

The toolkit is intended for senior hospital management, operational managers, clinicians, pharmacists, nurses, laboratory teams and others involved in the delivery of advanced therapies.



Institutional readiness

Support for healthcare organisations that are working towards the delivery of advanced therapies for patients.





Education portfolio





Coordinated by

e-Learning for NHS staff



ATMP_01_01 INTRODUCTION TO ADVANCED THERAPY MEDICINAL PRODUCTS

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Introduction to advanced therapy medicinal products

This session provides an overview of advanced therapy medicinal products (ATMPs), explaining in simple terms how these therapies are produced, defining key terminology and using a range of illustrative examples.

In order to complete this session please work through each of the following sections. Complete the assessment in order to gain a certificate of achievement.

On average this session should take around 30-45 minutes to complete. You may pause your progress within the session and return to complete the rest of the session later.

Select the:

Accessibility icon to switch on the accessibility function, select the icon again to switch it off

■ Drawer icon to access information regarding the learning objectives for the session, references, additional resources and

.







Cell and Gene Therapy



The favourable environment in the UK





CATAPULT Cell and Gene Therapy

Cell and Gene Therapy Catapult is committed to ensuring high standards of research integrity and research best practice in the activities we carry out. We subscribe to the principles described in the UK concordat to support research integrity.

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