

SIP 2030 Skills Strategy: Getting Fit for the Future

Case Study: Addressing the sector skills gap in the advanced therapies industry



Advanced therapies have the potential to address significant and growing unmet healthcare needs. They offer the promise of treating and altering the course of diseases which cannot be addressed adequately by existing pharmaceuticals. The UK is at the leading edge of this disruptive industry and there is an opportunity to build a large-scale industry delivering health and wealth. The Advanced Therapies Apprenticeship Community (ATAC) has been established by the Cell and Gene Therapy (CGT) Catapult to develop the first apprenticeship programme designed specifically to train and upskill individuals to develop, manufacture and deliver these innovative therapies at scale.

Industry Sector:
Advanced Therapy Medicinal Products¹

An industry seeing exceptional growth

The UK has positioned itself among the early leaders in cell and gene therapies, and as the sector grows and therapies move towards commercialisation, there is increasing need for a range of technical, operational and clinical roles to support the scale-up of manufacturing of Advanced Therapy Medicinal Products (ATMPs) and their adoption in the healthcare system.

Organisations are forecasting the need for up to 3,000 new positions in the sector 2,000 of which will be cell and gene bioprocessing and manufacturing hires, some organisations having budgeted for more than 300 new hires over the next 24 months. This will more than double the ATMP workforce within the next 5 years.

The industry requires a mix of non-graduates, graduates, postgraduates and industry experienced professionals to support the development, manufacture and delivery of these therapies.

¹ An advanced therapy medicinal product (ATMP) is a medicinal product which is either:

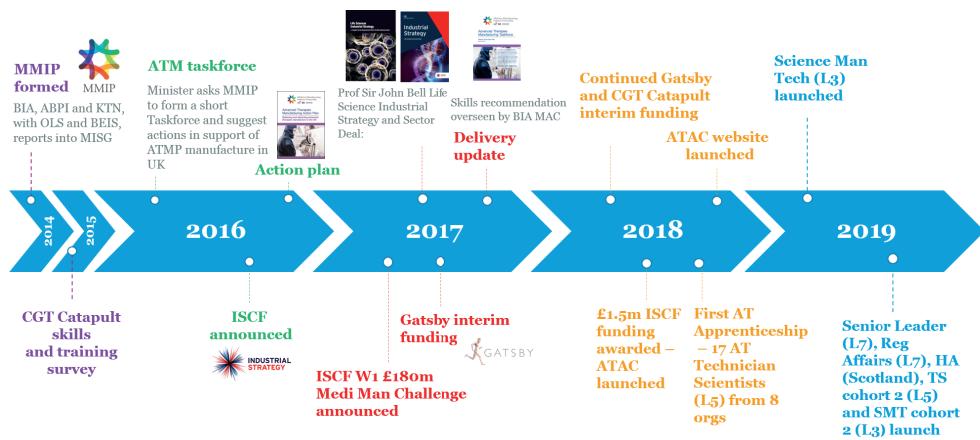
- a gene therapy medicinal product
- a somatic cell therapy medicinal product
- a tissue engineered product

<https://www.gov.uk/guidance/advanced-therapy-medicinal-products-regulation-and-licensing>

"Apprenticeships within the ATMP sector allow employers to recruit, train and develop individuals with direct skills required in the industry. This allows apprentices to gain a broader understanding of the science industry, enhancing their employment experience whilst gaining a valuable qualification."

Sheena Pumford, HR Director,
Cobra Biologics

ATAC Timeline



The specific skills challenge

As the industry progresses and companies move towards a commercial scale and manufacture, there is an expanding need for technical, operational and clinical delivery roles to support these manufacturing processes in a uniform and repeatable fashion. These roles require specific industrialisation and commercialisation skills.

When the industry was in its infancy there was a need for people with PhDs and graduates. However, as organisations mature and grow their operational footprint (e.g. in manufacturing, analytics and quality control) there is a need to move toward more technical and commercial posts.

Establishing the Advanced Therapies Apprenticeship Community (ATAC)

The Advanced Therapies Apprenticeship Community (ATAC) was established by the Catapult² with the aim to train at least 100 new apprentices at technical and operational manufacturing levels, as well as upskill existing technically oriented employees via apprenticeship routes over the next five years.

Alongside on the job training and training from external training providers, the community apprentice employers deliver advanced therapy specific training. This gives apprentices an opportunity to establish an early career community of researchers to enable collaboration, a community spirit and career support.

Training the workforce of the future

ATAC is delivering a steady flow of new recruits into the manufacturing workforce. However, a number of other individuals are involved in the delivery of advanced therapy treatments to patients. Currently the people skilled in treating patients with advanced therapies resides in small pockets of specialist centres, such as the nine approved centres for delivering CAR-T treatments.

For advanced therapies to be delivered through the NHS as routine, several new jobs and skills will be required. From pharmacists, porters, nurses and doctors, each job will require additional training, and upskilling will be needed. All these groups require education to understand how these treatments work, how to deliver them and to be able to answer patient questions.

Training for existing staff will need to come from the NHS to give it credibility and reach. Training will need to cover everything from the very basic to advanced level to cover skill sets and experience/prior knowledge that exists in the NHS.

What is the industry saying?

"We have supported laboratory-based apprentices for several years at Allergan Biologics and are absolutely thrilled to be involved in this innovative program. By combining forces with the University of Kent and other UK companies working in this rapidly evolving ATMP field, we truly believe we will develop critical skills for our own business and also support the strengthening of skills in ATMP development and commercialisation for the UK industry."

Linda Randall, Executive Director, Biologics Development, Allergan Biologics Ltd

"At NHSBT, we are creating a varied and sustainable workforce – apprenticeships are seen as a key part of that. Apprenticeships are genuinely a great opportunity for absolutely everyone, whether you are an apprentice or an employer considering enhancing the skills of your existing people or recruiting new talent into your organisation."

Laura Unitt, OD Manager, NHSBT

For more information contact apprenticeshipsinfo@ct.catapult.org.uk or visit www.advancedtherapiesapprenticeships.co.uk



UK Research
and Innovation

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2. The Cell and Gene Therapy Catapult is a centre of excellence in innovation, with the core purpose of building a world-leading cell and gene therapy sector in the UK

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