

CASE STUDY

Making strides in boosting skills in UK medicines manufacturing

The Industry Skills Accelerator brings together partners in the medicines manufacturing industry - which is worth £100 billion to the UK each year - to support businesses with their critical skills needs.

Funded by Innovate UK, the Industry Skills Accelerator (ISA) is a national initiative delivered in partnership between Cogent Skills, the Cell and Gene Therapy (CGT) Catapult, and CPI (part of the High Value Manufacturing Catapult).

Focused on advanced therapies and complex medicines - including cell and gene therapies, vaccines, biologics, and other high-potential modalities such as mRNA and oligonucleotides - the ISA is developing and delivering targeted training solutions to meet the evolving workforce demands of this highly regulated and fast-growing sector.

Cogent Skills

Cogent Skills is working closely with SMEs across the UK medicines manufacturing sector, to ensure businesses can access practical, employer-led skills support to enable growth and innovation. Research undertaken by Cogent Skills identified key workforce challenges for SMEs including practical lab readiness, cross-functional skills, and digital capability.

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The study made targeted recommendations including modular GMP training, regional clean-room facilities, and improved awareness and uptake of apprenticeships, creating a coherent roadmap to strengthen workforce resilience and future-proof skills in this highly regulated, innovation-driven industry.

Cell & Gene Therapy Catapult

The CGT Catapult is creating new apprenticeship routes into Medicines Manufacturing utilising the existing, well-established, multiple award-winning Advanced Therapies Apprenticeship Community (ATAC) network. The focus will be on early talent and upskilling in the following areas: production/manufacturing, quality, digital and automation; and new medicine modalities (including RNA and Oligonucleotides).

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CPI

As part of the Industry Skills Accelerator Programme, CPI is developing three new specialist training courses: RNA Design and Optimisation, An Introduction to Oligonucleotide Therapeutics, and Manufacturing of Oligonucleotide Therapeutics. Delivered through CPI’s RNA Centre of Excellence and RNA Training Academy, these courses will combine hosted and self-paced learning packages, making advanced skills more accessible across the sector.

Alongside course development, CPI is supporting STEM outreach and promoting wider Resilience resources to strengthen workforce capability in emerging therapeutics. By advancing industry-focused training, CPI is helping to equip the next generation of scientists and manufacturers to address global health challenges and unlock the potential of RNA innovation.

Head of Skills, Life Sciences, at Cogent Skills, Fay Treloar, said: “Maintaining the UK’s leadership in medicines manufacturing requires a skills system that is aligned, responsive and evidence-led.”

“Through the Industry Skills Accelerator Partnership, this collaborative approach is helping to address critical capability gaps and ensure public investment delivers a future-ready workforce that supports innovation, productivity and economic growth.”

Manager - Synthetic & Mammalian Upstream at CPI, Hirra Hussain, said: “Building a future-ready medicines manufacturing workforce is critical to maintaining the UK’s global competitiveness in advanced therapeutics. Through the Industry Skills Accelerator, CPI is translating cutting-edge science into practical, accessible training which meets real industry needs.”

“By developing specialist courses in RNA and oligonucleotide therapeutics, alongside STEM outreach and workforce resilience initiatives, we’re helping to equip scientists and manufacturers with the skills required to scale innovation, strengthen supply chains, and deliver impact for patients and the UK economy.”

Apprenticeship Scheme (ATAC) Project Support Officer, Cell and Gene Therapy Catapult. Joe Camden, said: “The Industry Skills Accelerator (ISA) has opened up new opportunities for employers across advanced therapies and other complex medicines to use apprenticeships to meet areas of increasing skill needs.”

“We’ve spent the past year engaging with employers to raise the profile of these apprenticeship pathways and encourage employers to invest in them. Nine apprentices have joined so far, and many more are in the pipeline. This is just the beginning: ISA has enabled us to lay the groundwork and as we embed the ISA

pathways into the regular ATAC-recommended offering, we have a robust set of ready-to-go upskilling routes in vital areas set to grow in demand.”

The ISA partners support Resilience, the UK Medicines Manufacturing Skills Centre of Excellence - which brings together experts from the University of Birmingham, University College London, Teeside University, Herriot Watt University and Bristol.

Since the ISA’s launch in August 2024, the CPI has moved ahead in developing three specialist training courses (RNA Therapeutics - Sequence and Construct Design; Introduction to Oligonucleotides; and Oligonucleotide Synthesis and Purification: Lab to Manufacturing Scale).

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Meanwhile, CGT Catapult has identified urgent skills gaps across manufacturing, quality, digital and automation based on insights from the 2023 Skills Demand Survey and 2025 Workforce Foresighting research.