

# An Introduction to Biomanufacturing and Advanced Therapies

Skills and Training Laboratories Training Course  
Sycamore House  
Cell and Gene Therapy Catapult

# An Introduction to Biomanufacturing and Advanced Therapies

This one-day classroom-based course introduces the core biological principles underpinning modern biotherapeutics, with a focus on advanced therapies such as cell and gene therapies. We will explore the scope of advanced therapies and their disease targets, use case studies to explore development requirements for safety and efficacy, and provide an overview of manufacturing processes and challenges, along with the role of the Cell and Gene Therapy Catapult in supporting the sector. The day concludes with a tour of our Skills and Training Laboratories, showcasing process and analytical equipment in action.

## Learning objectives:

- Recall the history of biotechnology
- Understand the principles of cell biology that underpin advanced therapies, and apply this knowledge to the scope, development and manufacture of Advanced Therapies Medicinal Products (ATMPs)
- Recall the underlying biology of the immune system and link the concepts to applications in cellular immunotherapies
- Describe examples and applications of biotherapeutics and ATMPs
- Recall and discuss the basic processing steps used in biomanufacturing
- Appreciate and identify the challenges of manufacturing ATMPs



# An Introduction to Biomanufacturing and Advanced Therapies

Course title	An Introduction to Biomanufacturing and Advanced Therapies
Course level	Introductory
Course fee (per delegate)	£500 plus VAT
Course dates	This course is run monthly, visit our Skills and Training Laboratories website for current dates. We are also able to tailor this course to a client’s specific requirements, please contact us to discuss bespoke content and alternatives dates.
Venue	CGT Catapult Skills and Training Laboratories, Sycamore House, Stevenage

## Who should attend

This course is ideal for newcomers to biotherapeutics and advanced therapies, including industry suppliers, as well as professionals already working in the sector who want to deepen their understanding of the science, applications, and manufacturing processes behind these therapies.

## Pre-course expectations and recommendations

- There is no expectation of prior knowledge for this course.
- If you are unsure if this course is suitable for you, please contact our Skills team via [skillstraininglabs@ct.catapult.org.uk](mailto:skillstraininglabs@ct.catapult.org.uk) and we will be happy to advise.
- **Important** - once enrolled, delegates will be asked to complete a pre-course questionnaire. Your comments will enable our trainer to gauge the experience and expectations of the attendees, and where appropriate tailor the content to the audience.

## Assessment

There is no formal assessment for this course, however delegates will be encouraged to participate in several reflection activities. You will be asked to complete a post-course questionnaire at the end of the course.

# Agenda

Time	Session Details
09.15 - 09.30	Registration, tea and coffee
09.30 - 09.50	Welcome and introductions. Health & safety briefing. Course overview.
09.50 - 10.50	Biotech terminology. A history of biotechnology. Basic cell biology, from DNA to protein, protein structure and function, when things go wrong.
10.50 - 11.05	<b>Break</b>
11.05 - 12.05	Overview of the human immune system including proteins, cells, tissues and organs of the immune system. The cell cycle, cancer, autoimmunity. Exemplar case studies.
12.05 - 12.30	Assessment for learning activity (low stakes)
12.30 - 13.15	<b>Lunch</b>
13.15 - 14.15	An introduction to advanced therapy medicinal products (ATMPs): principles, disease targets and early ATMPs. ATMP terminology. Viral vectors. ATMP innovator products and case studies.
14.15 - 15.00	An introduction to manufacturing gene therapies and cell therapies.
15.00 - 15.15	<b>Break</b>
15.15 - 16.30	Biomanufacturing terminology, techniques, solutions and challenges.
16.30 - 17.00	Review, reflection and feedback. Complete post-course questionnaire.
17.00	<b>End of course</b> (optional tour of the Skills and Training Laboratories)

Final agenda subject to change.



## Address:

Sycamore  
House  
Leyden Road  
Stevenage  
SG1 2BP

## How to find us

**Driving** - to park in our carpark use the vehicle security gate on Leyden Road

What3words ///slip.cakes.owners

**By taxi or on foot** - use the pedestrian security gate on Gunnells Wood Road

What3words ///parent.risk.lines

Once on site proceed to the main reception located on the south-west side of the building

## No smoking

Please be aware that Stevenage Science Park is a no smoking site.

## Contact us

We want you to enjoy this training course, but if you have any concerns, please do not hesitate to contact us at [skillstraininglabs@ct.catapult.org.uk](mailto:skillstraininglabs@ct.catapult.org.uk).

Sycamore House is located just outside Stevenage town centre.

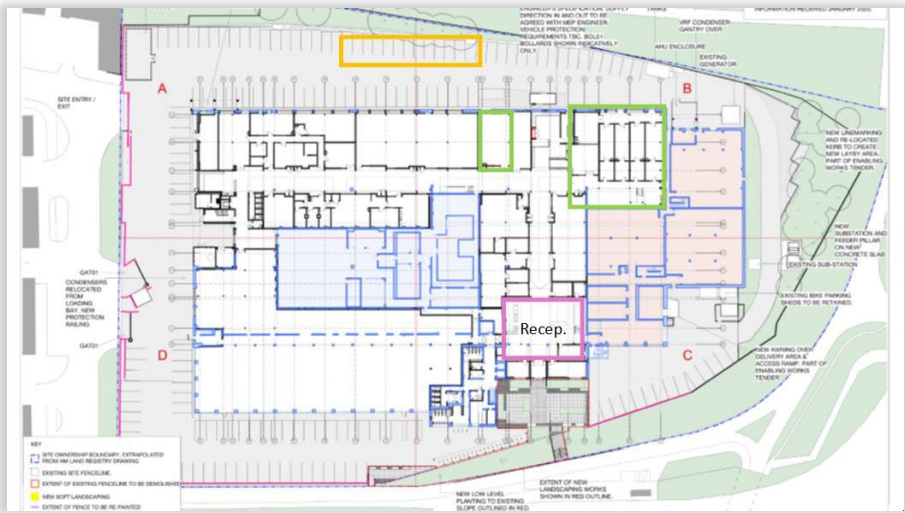
Sycamore House is close to the A1(M) via junction 7, the connectivity of the campus by car is considered good. Stevenage is well connected to major hubs. Cambridge is only 40 kilometres away and reachable within 40 minutes by train, and it takes only a 21 - minute train journey to reach King's Cross in London. In addition, Luton and Stansted international airports are reachable within 40 minutes and Heathrow within 1 hour.

## Parking

There are designated car parking spaces available to CGT Catapult staff and visitors to Sycamore House including one electric charging parking space. Car parking is available on a first-come, first-served basis. Our parking spots are marked with the Catapult logo/sign. There are additional parking spots for visitors that is shared among the other tenants in the building. These spots can be booked via building reception in advance.

Additional parking at Stevenage Football Club is available for nine cars for Catapult employees and visitors - see map below.

# Directions



Area marked in orange is car parking allocated to CGT Catapult employees on a first-come, first-served basis.

The building entrance / reception is marked with purple, and the CGTC ground floor areas, including our Skills and Training Laboratories are marked in Green.

## Walking and cycling

Although the walk from the town centre and station takes approximately 25 minutes, there are continuous footpaths and cycleways, and safe crossings all the way to our entrance.

There are 33 cycle spaces for general use. There is a bike store located at the front of the building entrance accessed via Gunnells Wood Road. The spaces for the bikes are available on a first-come, first-served basis.



## Car Parking at Stevenage Football Ground

Map showing the additional parking available at the East and West areas of Stevenage football ground.

