

Job Description

Job Title: Scientist – Technology & Process Innovation

Reporting to: Managing Director of Technology & Process Innovation

Location: 12th Floor Tower Wing, Guys Hospital, Great Maze Pond,
London SE1 9RT

The Cell and Gene Therapy Catapult (CGT Catapult) is an independent innovation and technology organisation committed to the advancement of cell and gene therapies with a vision of a thriving industry delivering life changing advanced therapies to the world. Its aim is to create powerful collaborations which overcome challenges to the advancement of the sector.

With over 400 experts covering all aspects of advanced therapies, it applies its unique capabilities and assets, collaborates with academia, industry and healthcare providers to develop new technology and innovation.

The Cell and Gene Therapy Catapult works with Innovate UK.

Purpose of Role:

The purpose of this role is to support the development of novel cell and gene therapy medicinal products and associated technologies for multiple clients and Collaborators. Working in multidisciplinary teams, this role will play a central role in the delivery of cell engineering activities across our project portfolio using gene editing tools like CRISPR/Cas9 to enhance the functions of therapeutically relevant cell types. Utilising their iPSC and molecular biology skills, the role will also apply in-depth technical expertise to accelerate the development and translation of predominantly pluripotent stem cell (PSC) derived therapies. The CGT Catapult's PSC strategy focus is on the development and translation of closed and scalable industrial bioprocessing techniques, to ensure supply of these critical materials for *in vivo* and *ex vivo* cell therapies and this role will provide a depth of technical expertise in these areas.

Key Accountabilities:

- Working in a matrix-team environment contribute expertise and influence the design and planning of laboratory work.
- Provide subject matter expertise in molecular biology and PSC culturing.
- Apply knowledge of analytics and gene-editing to manipulation/engineering and characterisation of PSCs and differentiated cell types.

- Undertake laboratory-based development activities across a range of projects applying expert knowledge of PSC and developmental biology to characterise and optimise PSC expansion and differentiation processes.
- Aid the translation of research-based manufacturing processes to clinical manufacturing protocols that will become suitable for commercial use.
- Keep up to date with technological and scientific progress in the PSC and associated cell therapy field.
- Plan, write and execute scientific protocols, maintain accurate records and manage data in line with company policies.
- Record, analyse and communicate experimental findings in electronic laboratory notebooks, scientific reports, posters and peer-reviewed publications and present results internally and to external Collaborators.
- Maintain high standards of laboratory practices in all development activities.

Experience:

- Experience in gene editing using one or more cell engineering technologies – e.g. CRISPR, ZFN, TALENs – for both gene knock-out and knock-in is essential.
- Experience with development/optimisation and application of a wide range of molecular biology methods is essential.
- Experience with development and application of analytical methods for the detection and readout of gene engineering processes, including e.g. qPCR/ddPCR, next-generation sequencing, flow cytometry is essential.
- Knowledge and hands-on experience of various non-viral delivery methods is essential.
- Excellent working knowledge of PSC developmental biology and experience with maintenance and differentiation of PSCs is essential.
- Experience in differentiating toward the haematopoietic lineage is not required but would be advantageous (e.g. hematopoietic progenitor cells, lymphocytes, NK cells).
- Demonstrable experience of troubleshooting, developing or optimising PSC differentiation protocols is highly desirable.
- Demonstrable experience in mammalian cell culture and the use of aseptic techniques is required.
- Experience in implementing Design of Experiments principles is desirable.
- Experience in product development/release desirable.
- Experience in translational research desirable.

Knowledge / Skills / Competencies:

- Highly motivated, pragmatic and practical to support the mission of the Cell and Gene Therapy Catapult to accelerate the development of a commercial cell and gene-based therapy industry in the UK.
- Desire to establish a high-profile career within cell and gene sector and the personal drive to help push the sector to be a commercial success.
- Ability to work within a fast-paced matrix-team environment, maintaining a high standard of work.

- High degree of motivation, problem solving skills and innovative thinking
- Excellent oral and written communication skills
- Ability to work quickly and accurately with limited supervision.
- Good IT skills including experience of using data analysis software packages.
- Keeps up to date with professional knowledge, expertise and best practice.
- Excellent organisational skills with a strong focus on attention to detail
- Ability to quickly establish credibility and build rapport and trust.
- Proven ability to engage constructively with colleagues at all levels across different departments to deliver objectives and to respond to a wide range of customer and management needs.
- A good team player easily adaptable to new challenges
- A positive attitude towards learning, personal and professional development.
- Keeps up to date with professional knowledge, expertise and best practice.
- Willingness to travel

Education / Qualifications:

- PhD in stem cell therapy/stem cell or developmental biology or BSc with 3+ years industrial experience within a stem cell therapy/stem cell or developmental biology environment.