



# Appointment of Principal Investigator

April 2021



## Executive Summary

The National Institute for Bioprocessing Research and Training ('NIBRT') is a global centre of excellence, headquartered in Dublin, that provides training and research solutions to the global biopharmaceutical manufacturing sector. Established with IDA Ireland and opened in 2011, NIBRT partners with Higher Education Institutes to provide training and research infrastructure facilities not previously available in Ireland. NIBRT arose from an innovative collaboration between University College Dublin, Trinity College Dublin, Dublin City University and the Institute of Technology, Sligo, with core funding by the Government of Ireland through Ireland's inward investment agency, IDA Ireland. NIBRT's 6,500 M<sup>2</sup> facility has over 80 employees currently and houses fully operational pilot plants for biologics manufacturing training to industry and education, as well as multiple research laboratories focussed on biopharmaceuticals manufacturing research.

The National Institute for Bioprocessing Research and Training (NIBRT) invites applications for the position of Principal Investigator (PI) with a specific focus on cell and gene therapy products, vaccines and other emerging molecular entities, to create, mentor, and lead a highly competitive team within the Research function of the Institute. In line with our facility and research remit expansion plans, the focus of the appointment will be the further development and expansion of NIBRT's research activities in biopharmaceutical manufacturing and ATMPs.

The successful candidate will have an excellent record in research and development, including high quality publications or similar outputs, a proven track record of attracting significant grant funding, and experience with postgraduate supervision. The successful applicant will have a proven ability to effectively lead, mentor and manage a high performing research team, possess excellent communications skills, and be willing to contribute to the further development of the wider activities of NIBRT.



## About NIBRT

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## NIBRT's Mission

- Become a global leader in biopharmaceutical manufacturing research, education & training.
- Build out our research and development scale, capability and critical mass to establish NIBRT as a globally recognised centre for industry applied research and process development.
- Be the hub for bioprocessing manufacturing research in Ireland and internationally.
- Continue to support the growth and development of the biopharmaceutical industry in Ireland and internationally.



## About NIBRT *continued*

### Background to NIBRT

NIBRT was established in 2006 by IDA Ireland with the support of Government with a funding commitment to build a training and research facility in support of the emerging biopharmaceutical manufacturing industry. NIBRT opened its doors in 2011 and has since established itself as a globally renowned centre of excellence for training of bioprocessing talent and an emerging centre for manufacturing research supporting the industry. Some of the key highlights in 2020 include:

- In 2020, NIBRT delivered 31,856 days of training to 4,000 trainees
- Total value of equipment donation was €8.5m
- Total value of funded and collaborative research income was €2.4m
- 45.5% of research income was funded by industry



## NIBRT Research

NIBRT Research is a world leader in developing innovative technologies that advance biopharmaceutical manufacturing and a resource for the global biopharmaceutical industry.

Inspired by the manufacturing challenges facing industry, NIBRT Research makes transformative discoveries across multidisciplinary areas such as analytical science, cell and genetic engineering, informatics, and bioprocess engineering. These discoveries are utilised to advance the state-of-the-art in their fields and revolutionise the manufacturing of recombinant proteins, vaccines and cell and gene therapies.

NIBRT Research engages postdoctoral scientists and graduate students in leading edge biopharmaceutical research, helping to inform and inspire the next

generation of research leaders in industry and academia.

NIBRT Research is comprised of eminent scientists supported by world-class facilities and dedicated support teams who actively pursue productive collaborations with academic and industrial scientists in Ireland and throughout the world. Thus, NIBRT will deliver outstanding biopharmaceutical manufacturing research built on effective collaboration and world-leading innovation.

NIBRT is committed to promoting the performance of research to the highest standards of professionalism and rigour by its staff and students, and to the accuracy and integrity of the research record in publications and elsewhere. NIBRT aims to promote integrity in research through good example, training and open discussion of issues of research integrity.

### NIBRT Research Strategic Plan 2021-2026

Strategic Goals (SG) and Enabling Goals (EG)

**SG1:** Create a world-renowned  
**Biopharmaceutical Analysis Research Centre**

**SG2:** Promote Ireland as a preferred CGVT manufacturing location by **external engagement**

**SG3:** Facilitate the creation and commercialisation of NIBRT **intellectual property**

**SG4:** Educate and train world-leading postgraduate and postdoctoral scientists.

**SG5:** Collaborate with **Contract Analytical Services (NSL)** to expand services offered.

**EG1:** **Communicate** effectively with NIBRT Research's internal and external stakeholders.

**EG2:** Improve and expand NIBRT's research **infrastructure** and research supports.

## NIBRT Training

NIBRT provides a “one stop shop” for the bioprocessing Industry’s training requirements. We provide a dynamic catalogue of course content from which we build unique training solutions for our Clients. These solutions range from operator training through to the senior management training and can be delivered in a variety of formats to suit each Client’s requirements. Our aim is to deliver holistic training programmes in a realistic GMP simulated, operational biopharma manufacturing environment.

## NIBRT Education

NIBRT’s unique bioprocessing training facility allows undergraduate and post graduate students the opportunity to learn and practice complex technical bioprocessing procedures and to enhance their skills using the most modern equipment and facilities available.

NIBRT provides a range of undergraduate and postgraduate programmes which are specifically tailored to meet the needs of students who wish to develop their careers in the bioprocessing industry.

## NIBRT Online Academy (NOA)

The NIBRT Online Academy (NOA) provides industry leading, interactive, multimedia online training courses on all aspects of biopharma manufacturing. Developed by the award-winning National Institute for Bioprocessing Research and Training (NIBRT) in Dublin, Ireland, NOA provides easy access and cost effective e-learning options for all those interested in biopharma manufacturing.

## NIBRT Culture

NIBRT’s Culture defines the desired ethos of the Institute and how we interact with our colleagues and clients. Our Culture is summarized by “CIRCLES” logo which represents the interdependency between our three main areas of activity; training, research and operations.



## NIBRT Global Partner Programme

The NIBRT Global Partner Programme supports an international alliance of leading training and education organisations to help address the global shortage of a skilled biopharma workforce. Partners include Jefferson Institute for Bioprocessing (JIB) in Philadelphia, Biologics Innovation Facility (BIF) at the University of Technology, Sydney, and the Guangzhou Bioprocess Research and Training Academy (GBRTA).



# Advanced Therapy Medicinal Products (ATMPs) at NIBRT

In recent years there has been dramatic growth in the number of clinical trials and in the level of commercial activity with Advanced Therapy Medicinal Products (ATMPs), including cell and gene therapies (CGTs) and novel-modality vaccines, and it is widely predicted that these advanced products will collectively constitute the next significant wave of biopharma growth.

The manufacture of these advanced therapy medicinal products for the supply of global markets represents a major opportunity for Ireland in the coming years.

Ireland has recently been successful in attracting a number of CGT investments, most notably:

- The opening by Takeda of a manufacturing facility in Grangecastle to produce its allogeneic cell therapy Alofisel.
- The recent announcement by MeiraGTx of a viral vector manufacturing facility in Shannon to support various gene therapy products.

In 2018, NIBRT led the establishment of the Cell and Gene Therapy and Vaccine Manufacturing Forum along with many stakeholders from industry, academia and government.

The Forum is currently working on addressing what they believe Ireland needs to do to ensure we capitalise on the huge commercial and therapeutic opportunity that CGT&V represent.

On the skills front, NIBRT has introduced a number of CGT-related courses into its training curriculum with further expansion planned for 2021. In research, NIBRT has commenced a significant collaboration with Abbvie/Allergan, co-funding from Enterprise Ireland, focused on viral vector characterisation and optimisation of the CGT manufacturing process, and has recently - in partnership with Avesta and Bluebridge technologies - been awarded significant Disruptive Technology Innovation funding to support the development of a digitalised cellular engineering system to produce cell therapy cancer treatments with a focus on allogenic (off-the-shelf) therapies and those for solid tumours.

In 2020, NIBRT received approval from the board of IDA Ireland for an investment to expand our Foster's Avenue facility to incorporate Cell and Gene Therapy capabilities. The newly-expanded facility, which we expect will open in 2022, will enable NIBRT to expand its training and research services into this new area.



## Role Summary

NIBRT performs world class, industry-aligned research in all areas of biopharmaceutical manufacturing with the overarching aim of delivering practical solutions for the biopharma industry. Driving integration of the key components of manufacturing, e.g. process, facilities, and infrastructure, to enable greater degrees of productivity and consistent product quality is a key deliverable of this research.

The NIBRT strategy in manufacturing research focuses on enhanced product quality and productivity. To achieve this, there are four central strands of research that are interconnected by NIBRT's Principal Investigators. These elements; **Cell Biology and Engineering**, **Bioanalytics**, **Advanced Manufacturing and Bioinformatics**, and **Data Analytics**, span the disciplines of molecular biology, bioprocess engineering, protein analytics and bioinformatics. These areas of research along with many others, are reinforced by the numerous relationships that NIBRT have developed with funding institutions, academic partners and industry associations.

An appointed Principal Investigator is expected to engage in research that contributes to practical applications of biotechnology that enables the development and manufacture of complex biopharmaceuticals, specifically gene therapies, cell therapies and other emerging therapeutic entities.

NIBRT invites applicants with an outstanding research and development pedigree in the field of biopharmaceutical science with a specific focus on the manufacture of these complex modalities.

NIBRT is especially interested in scientists with a track record and interest in addressing fundamental and applied scientific challenges in the field such as improvements in the production, formulation, storage or transport of gene or cell-based products to improvements in their functional testing, characterisation and qualification enabling demonstration of consistency in product characteristics.

Start-up support packages will be available to the successful candidate.

## Key Duties & Responsibilities

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As a Principal Investigator at NIBRT, the successful applicant will:

- Establish and lead a team producing impactful research relevant to the manufacture of gene therapy, cell therapy or other advanced therapeutic modalities.
- Lead a world-class research programme in their own field, publishing in the highest quality journals.
- Attract national and international research funds to support their research activities.
- Supervise research staff and research postgraduate students at NIBRT.
- Contribute to the wider development of research activities at NIBRT and actively participate to assist the Institute in achieving its strategic goals.
- Contribute to the wider activities of the institute, including the development of training, outreach and other activities to maximise the understanding and impact of research to support the manufacture of advanced biopharmaceuticals nationally and internationally.
- Engage with key stakeholders, including higher education institutes, various bodies in the biopharmaceutical sector, including multinationals and SMEs, various governmental bodies and agencies.
- Collaborate with colleagues at NIBRT to identify and seek other funding for the Institute to support the continual development of research activities.

## Person Specification

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The successful candidate will have the following:

- Doctoral degree in any life science, physical science or engineering discipline that clearly aligns with biopharmaceutical manufacturing.
- A specific focus on cell and gene therapy or other emerging modalities with a strong focus on research.
- A track record in securing competitive research funding in your own name.
- A record of high-quality published research output.
- Significant achievement in research supervision.
- Strong evidence of engagement with the community and industry.
- The ability to attract competitive research funding is essential. International research or teaching experience is desirable.

## Knowledge & Experience Required

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The successful applicant will have a deep knowledge of fundamental and applied sciences applicable to biopharmaceutical manufacturing with a specific focus on gene therapy, cell therapy or other emerging therapeutic modalities such as oligonucleotide derived therapies. Fields of interest may include but are not limited to:

- Manufacture of gene therapy or cell therapy and advanced bioprocessing.
- Formulation and delivery of such therapies.
- Functional analytics specifically cell-based assays for assessment of potency or safety.
- Gene editing.

- Cell engineering.
- Gene synthesis using *in vitro* transcription.
- Regulatory science applicable to advanced biopharmaceutical development and approval.
- The applicant may have spent significant time in industry and have practical knowledge of the technical challenges facing the field, the development of products and emerging processes for their regulation and who wish to pursue avenues of research to address these challenges.
- The applicant will be a scientific leader in the field with an outstanding record of scientific research productivity, demonstrated through publications and patents, grants, leadership in product development or other means.
- The applicant will have leadership experience in training and mentorship appropriate to their career stage and history.

## Required Skills & Competencies

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The ideal candidate will have:

- Evidence of sustained and impactful scholarly research demonstrated through impactful peer-reviewed publications, patents, product development leadership, or related industrial metrics of research productivity.
- A history of attracting competitive research funding from prestigious sources.
- A history of successful and impactful collaboration with Industrial Partners.
- Other key measures of esteem, such as keynote conference presentations, editorships of respected journals, participation in standardisation activities, industry best practice forums or similar.
- Evidence of an ability to translate research into practical applications for example new products or services, new methods of analysing or qualifying complex biopharmaceutical products, improvements to production processes for biopharmaceuticals, specifically cell and gene therapies or other emerging therapeutic modalities.
- Evidence of the ability to play a key role in the development of research collaborations, nationally and internationally, inter-institutionally or with industry and government stakeholders.
- Evidence of a capacity for leadership and the ability to contribute to the strategic vision for the Institute and to participate in activities that benefit all operational aspects of the Institute.
- Excellent interpersonal skills and the capacity to actively contribute to the further development of NIBRT's research mandate.
- Evidence of an ability to engage effectively with key stakeholders and collaborators in other national or international educational or research institutes, healthcare, the pharmaceutical industry, government bodies and agencies.
- Evidence of an ability to contribute to society through significant outreach and related activities that ensure the development of the understanding and impact of biopharmaceutical science and manufacturing research.



# Application Procedure & Selection Process

## Application Procedure

NIBRT has appointed Perrett Laver to conduct an executive search alongside the public advertisement of this post. Applications should consist of a covering letter, full CV detailing relevant academic qualifications, full employment history, relevant achievements, and full contact details. Where candidates have particular requirements if invited to interview, this should be stated in a covering letter.

To apply for the role, please visit <https://candidates.perrettlaver.com/vacancies/> quoting reference **5135**. The closing date for applications is **noon BST on Monday 28th June 2021**.

Shortlisted candidates will be invited for informal conversations followed by formal interview with the Selection Committee.

Please note that applicants who do not address the application requirements above in their cover letter will not be considered at the short list stage.

Applicants should note that the interview process for this appointment will include the delivery of a presentation.

## Selection Process

NIBRT's selection methods may consist of any or all of the following: Interviews, Presentations, References and Situational Exercises.

Information supplied by candidates in their application package as outlined above will be used to shortlist for interview. Applications from non-EEA citizens are welcomed. However, eligibility is determined by the Department of Enterprise, Trade and Employment and further information on the Highly Skilled Eligible Occupations List is set out in Schedule 3 of the Regulations and the Ineligible Categories of Employment are set out in Schedule 4 of the Regulations.

## Equal Opportunities Policy

NIBRT is an equal opportunities employer and is committed to employment policies, procedures and practices which do not discriminate on grounds such as gender, civil status, family status, age, disability, race, religious belief, sexual orientation or membership of the travelling community. On that basis, we encourage and welcome talented people from all backgrounds to join the NIBRT team.



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