

# RESEARCH STRATEGY ADDENDUM 2024-2025



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## Foreword

I am delighted to present our Research Strategy addendum 2024–2025. In April 2021, our first-ever dedicated research and development strategy was launched, with the objective to position ourselves as a key research leader in the fields of transfusion, transplantation screening and blood sciences. Our research aims to maximise the ability of blood and tissue donation to improve the health of patients, as well as providing the evidence-base for improving various aspects throughout the vein-to-vein process.

The effective implementation of our strategy throughout the past 3 years has led to the creation of a positive, inclusive and innovative environment for all engaging in research. We have focused on developing long-term research partnerships and expanding our research skills and knowledgebase. We have contributed to numerous peer-reviewed research publications and conference presentations. It was truly wonderful to hold our inaugural BloodDHIT (Blood Donation Haematology Infection and Transfusion) conference in 2022, and look forward to holding this conference every two years from now on.

The most effective research is always a collaborative process, bringing together a team of individuals with expertise in different areas. Well done to all that have contributed thus far. We are excited to keep expanding our research capabilities and present our planned initiatives for the 2024-2025.

Ní neart go cur le céile,

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# Overview



# Research Objectives

The Research & Development Strategy for 2021 to 2023 defined the overarching goal of our research programme is to provide the evidence-base for improving the donation process, developing blood testing services and determining the optimum use of blood and tissue. All of our research endeavours should strive to maximise the ability of blood and tissue donation to improve the health of patients, and findings can inform future organisational development.

It is still envisioned that by the completion of this strategy addendum we will have:

- Positioned ourselves as a key research leader in the fields of transfusion, transplantation screening and blood science
- Provided insights on the parameters affecting donor health and welfare
- Evaluated evidence for donor testing methodologies and algorithms
- Implemented improvements to blood component and tissue production
- Assessed the clinical utility of blood component transfusion in recipients
- Proven through our research endeavours our ability to attract and retain the brightest clinical, medical and scientific staff and experts.

(IBTS Research & Development Strategy 2021-2023)

# Research Environment

Since the publication of our first Research & Development strategy in 2021, a number of key strategies and guidelines have been published, that directly impact research activities.

- **Connections that count, Irish Blood Transfusion Service Strategy for 2021-2025**, aims to support better healthcare, drive more sustainable work practices and to enable to IBTS be at the forefront of transfusion medicine and science (1).
- **Impact 2030: Ireland's Research and Innovation Strategy**. This strategy aims to put Research & Innovation central to addressing Ireland's social, economic and environmental challenges. As part of this, the activities of the Irish Research Council and Science Foundation Ireland will be combined in a new funding agency supporting greater interdisciplinary research activity (2).

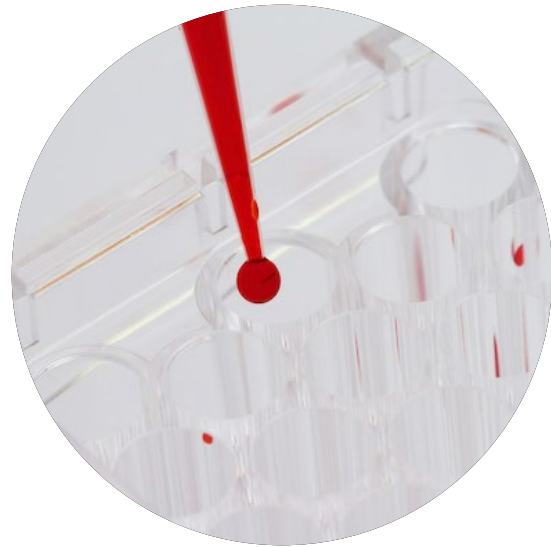


- **National Action Plan for Open Research 2022-2030.** Institutions are required to develop a specific open research plan for accessing research data (3).
- **European Blood Alliance Strategy 2023-2026,** outlines our shared vision, with fellow EBA members, of a safe and sustainable blood supply for Europe. In addition, as blood safety is a global challenge is support universal access to safe and quality assured blood products. The EBA will continue to support members as they strive for excellence by being innovative and implement actions through evidence-based methods (4).
- **National Strategy for Accelerating Genetic and Genomic Medicine in Ireland** aims to have a coordinated national approach to genetics and genomics (5).
- **European Union (EU) Global Health Strategy** aims to improve global health by expanding the EU's international health partnerships. Many health issues and concerns transcend national boundaries and require collaboration between countries to address them (6).
- **The HSE Global Health Programme** supports engagement with low and middle income countries to strengthen health systems and improve the health of populations (7).
- **Use of Research Evidence in the Health Service Executive (HSE) in Ireland - A Study with Senior Decision-Makers** described how many sources of evidence, including research findings, inform decision-making (8)
- **HSE National Policy for Consent in Health and Social Care Research** main objective is to place the prospective research participant at the centre of the research process (9).





- **The Health Research Board Strategy 2021–2025** states productive research is enhanced by fostering European and international coordination and collaboration (10).
- **Ten-year vision of NHSBT for stem cell transplantation and cellular therapies** recommends strong and sustainable world-class clinical infrastructure. This strategy priorities creating capacity to meet increased demand for delivering HSCT and ATMPs and building a workforce fit for the future (11).
- **IBTS Research & Development Strategy 2021-2023** supports a culture where the consideration of research opportunities is an everyday activity, which is enabled by strategic partnerships with leading research institutions.
- **Patient-Public Involvement (Donor-Public Involvement)** is a critical component for accessing research funding and is referenced in the majority of research strategies. PPI also supports transparency of research activities, a key component of the Health Research Regulation.
- **IBTS Medical Model-of-care** highlights the need for involvement with clinical trials and monitoring transfusion recipient outcomes.
- A total of **27 peer-reviewed publications** since launch of the strategy (2021-2023).



## Stakeholder Consultation

An internal meeting with stakeholders discussed the relevance of the following:

- **Research Data**  
It is imperative that we strive to meet the recommendations of the open data directive, whilst at the same time ensuring our data is primarily analysed and published by IBTS. A framework for accessing, managing and analysing robust research data is required and a centralised approach to extracting and merging data would help maintain the quality of the data. The IT strategic initiatives for cloud-based data may benefit the overall management of research data.
- **Facilities**  
There was broad support for expanding our research laboratory capabilities, as well as increasing our knowledge base on, and investigating what future role we may wish to have, in the provision of cellular therapies and Advanced Therapeutic Medicinal Products (ATMPs).

- **Translation**

Innovative research should ultimately lead to product translation from the research bench to industry. We need robust intellectual property structures for this process.

- **Resources**

Time for staff to engage in research, as well as the skills needed, are limited. There is an appetite amongst staff across all disciplines to engage in research, and it's important to support this desire for a positive research culture to continue to develop.

- **Financial assessment**

Assessment of the investment in various research projects compared to the outputs should be considered.

## Critical for Success

- Increased time for up-skilling staff to enable them to engage in research.
- Robust research legal framework which clearly defines our roles and responsibilities regarding collaboration, data transfer, material transfer, ethical approval, research indemnity and intellectual property.
- Expand the number of staff in the research department.
- Research skills of writing and data analysis.
- IT support.
- Preparation for changing expectations.
- Cellular therapy education.
- Platelet demand in the future will change.
- Job expectations and working culture .
- Organisational support by outlining the future strategic need for clean room facilities.





# Research Focus For 2024 & 2025

## Capacity

### Research Staff

- ▶ Expert senior scientific support to drive key research
- ▶ Medical fellow to expand clinical research

### Research Laboratory

- ▶ National Blood Centre general research laboratory and cell culture facility

### Translation of Components for research

- ▶ Intellectual property
- ▶ Research Contracts

### Research Funding

- ▶ Strategic partnership awards
- ▶ Support Patient/Donor Public Involvement (PPI)

## Capability

### Continued Education

- ▶ Cellular Therapy Research Group (strategic partnership with Trinity Translation Medicine Institute)
- ▶ PhD and postdoctorate level research. A total of 2 PhD and 2 Postdoctoral projects are currently co-funded by IBTS

### Research Skills

- ▶ Academic affiliation
- ▶ Scientific writing
- ▶ Data analysis
- ▶ Statistical analysis
- ▶ Bioinformatics
- ▶ Health Economics

### Biobank strategy

## Culture

### Communication

- ▶ Website
- ▶ BloodHIT Conference
- ▶ Social Media
- ▶ Research Newsletter
- ▶ Research Presentations
- ▶ Leading Lights seminar series

### Open data & transparency

- ▶ Research data management
- ▶ Research data access

## Key Research

### Strategic Partnerships

- ▶ Research projects investigating various aspects throughout the vein-to-vein process will continue to be supported.
- ▶ Global Health through partnering with the National Blood Transfusion Service of Tanzania
- ▶ Research collaboration and Academic Affiliation with the Royal College of Surgeons of Ireland
- ▶ Participation in personalised medicine and cellular therapy research with the Trinity Translational Medicine Institute and St. James's Hospital
- ▶ Continue as a key contributor to the National Seroepidemiological Unit overseen by the Health Protection Surveillance Centre
- ▶ Further develop Public health and epidemiology research through affiliation with the University College Dublin School of Public Health, Physiotherapy and Sports Science

### Publish Existing Data

- ▶ Human Leucocyte antigen variation within Irish donor population
- ▶ Outcomes of National Haemovigilance data analysis
- ▶ Infectious Disease Epidemiology in Irish donors
- ▶ Blood antigen and antibodies present in Irish donor and patient populations
- ▶ Optimum Donor Iron Management

### Component Research

- ▶ **C**entre for **R**esearch **I**n **M**ajor haemorrhage and transfu**S**ION (CRIMSON) research programme (Joint initiative with Royal College of Surgeons of Ireland)
- ▶ Biomedical Excellence for Safer Transfusion (BEST) conventional Components team participation
- ▶ Platelet Extracellular Vesicles PhD research (Joint initiative with Technical University Dublin)
- ▶ Continued and expanded sustainable provision of components for research

# Implementation Plan

Objective	Year
<ul style="list-style-type: none"> <li>▶ Recruit senior scientific research staff</li> <li>▶ 5 peer-reviewed publications</li> <li>▶ BloodDHIT 2024</li> <li>▶ Develop donor research consent plan</li> <li>▶ Run two research training courses</li> <li>▶ Create research laboratory</li> <li>▶ SFI strategic partnership application</li> </ul>	<p><b>2024</b></p>
<ul style="list-style-type: none"> <li>▶ Run research training course</li> <li>▶ Implement process for research consent, separate from blood donation</li> <li>▶ Develop Biobank strategy</li> <li>▶ 11 joint peer-reviewed publications</li> </ul>	<p><b>2025</b></p>



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