



Sheffield  
Hospitals  
Charity



## Sheffield Hospitals Charity Research & Innovation Strategy

Enabling excellent healthcare  
for the people of Sheffield

2025 – 2027

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## Welcome from our CEO Beth Crackles



It is well known that NHS Trusts engaged in clinical research achieve better patient outcomes, including lower mortality rates and improved overall care quality.

Sheffield Hospitals Charity (**SHC**) is proud to support research and innovation across both Sheffield Teaching Hospitals NHS Foundation Trust (**STH**) and Sheffield Health and Social Care NHS Foundation Trust (**SHSC**).

As a regional and primarily, disease-agnostic funder within a large network of medical research organisations, we are committed to using our relatively limited funding to achieve the greatest added value. To guide our strategy, we’ve consulted with colleagues from both of our NHS Trusts, as well as external experts in research and innovation. Their input has helped us shape a thoughtful approach to maximise the impact of our funding on advancing research and innovation in Sheffield.

Sheffield Hospitals Charity’s core mission is to support Sheffield’s NHS and improve the lives of its patients. A significant amount of our income is from grateful patients and the families and friends of those who have received care in our hospitals and community services. We know that most of our supporters want their donations to help bring about tangible improvements in patient care in Sheffield – both today and in the future.

With these points front of mind, we have developed this Strategy which sees us focus on three key areas: funding research which speeds up the delivery of benefits to patients, widening participation and supporting research infrastructure.

While we will continue to consider a wide range of research initiatives, we are prioritising funding that will provide improvements for patients and families as soon as possible. This approach ensures that charitable funds deliver quicker, meaningful impact on patient outcomes, while helping our NHS Trusts increase the diversity of staff and patients involved in research and provide the infrastructure for future success.

## Introduction from our Ambassador Richard Stubbs



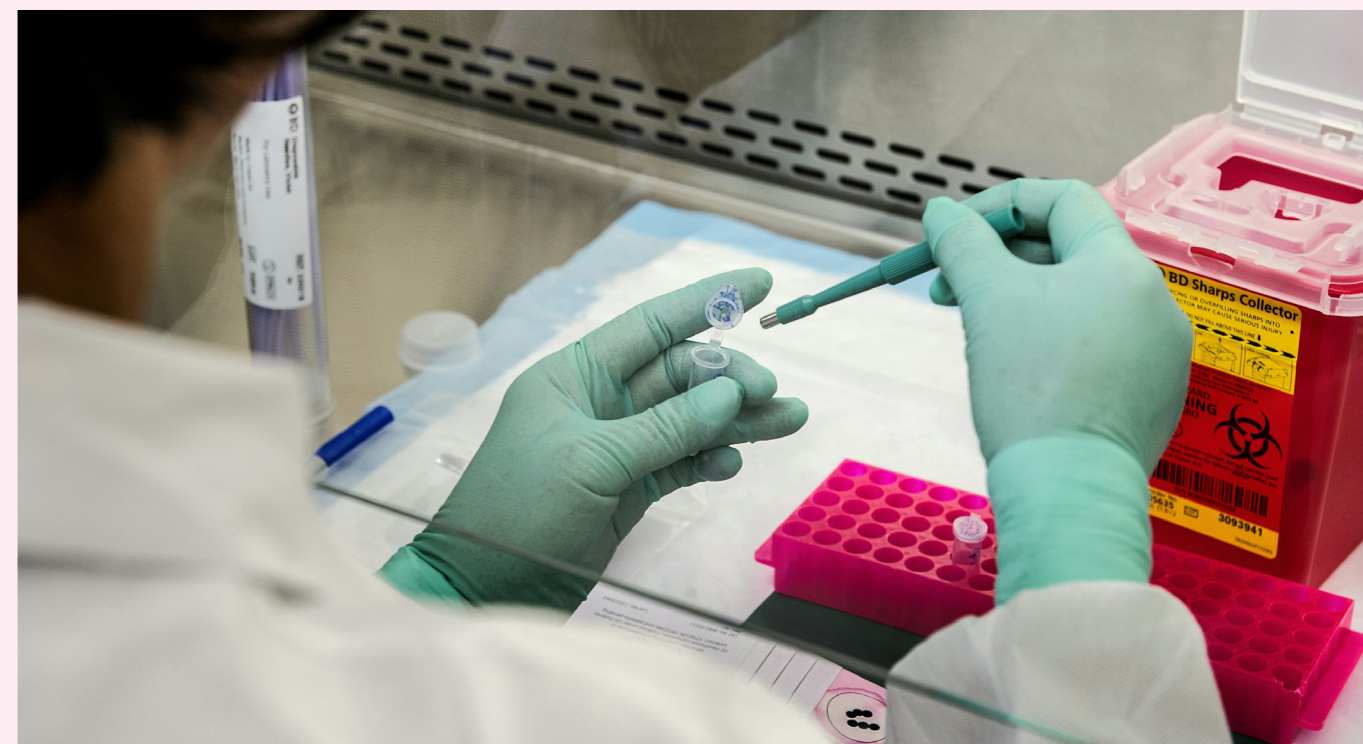
Health research is vital to unlocking the potential of new ideas that can significantly improve people's health and wellbeing. It is mission-critical for the NHS that we continue to find new ways of delivering care, and increasingly that we also focus on prevention and wellbeing as the real goal of our investment in healthcare. Despite the current operational pressures that the NHS is under, there is a huge opportunity for us to reimagine care delivery through targeted investment in research and innovation.

I'm honoured to be an ambassador for Sheffield Hospitals Charity. As CEO of Health Innovation Yorkshire and Humber I have the privilege of supporting our innovation and research sectors, both within and outside the NHS, to develop, test and ultimately implement their ideas into clinical use.

These are the ideas that will help us to transform the way that we can deliver care, and make the NHS sustainable for generations to come. When we look across to how other aspects of our lives have been changed through technology, it is evident that the innovation journey for the NHS is only just beginning.

**"I'm delighted to be able to support the team at SHC to prioritise which innovations will make the biggest difference to our patients, and how to use our funding to ensure that those benefits are felt as fast as possible for as many people as possible."**

## Supporting Innovation



Financial year 2023/24 saw STH launch a 'Getting Back on Track Innovation Fund', with the purpose of stimulating, galvanising and enthusing STH's post-pandemic recovery, and funding proposals, which aimed to unlock specific aspects of recovery or improvement.

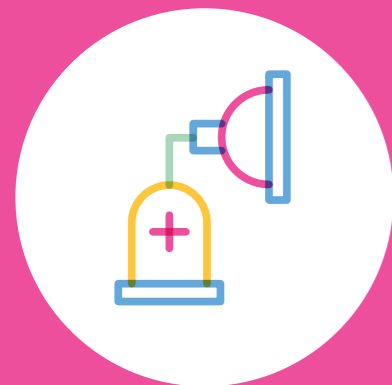
The program awarded a total of £333,380 across 21 innovation projects. In addition, the Trust also received its first dedicated innovation grant from SHC, which supported 3 projects with a total value of £25,000.

Following on from the above successes, STH and the SHC agreed to fund one joint call supporting innovation for 2024/25. The jointly funded call (with STH and SHC both contributing £150,000 each) offered

funding through a Dragons' Den competition format where all applicants were given an opportunity to pitch their idea and take questions from the 'Dragons'. The call was open to applications seeking to deliver high impact innovation and improve Trust services, patient care and/or staff experiences.

The Dragons' Den panel was made up of senior representatives from STH and SHC together with experts supporting the delivery of innovation within the Trust, and stakeholder organisations within the wider community. The panel also included patient representatives.

The 2024/25 Dragons' Den received over 50 applications and awarded £294,201 to 13 applicants, including:



## Anaesthetics-Crisis Stimulation Training

**The Problem:** Maternal anaesthesia crises arise due to failed or difficult intubation, which means oxygen is not safely delivered to mother and baby. General anaesthesia is only performed in approximately 10% of births, meaning anaesthetists have limited hands-on experience to learn critical skills. Despite technical advancements, failure to manage a mother's airway remains a significant national and international issue (UK incidence is 1 in 390, source: Obstetric Anaesthetists' Association and Difficult Airway Society's 2015 guidelines for the management of difficult and failed tracheal intubation in obstetrics). Simulation training is a valuable learning tool to manage such situations, allowing clinicians to practise emergency protocols, improve decision-making skills, and receive feedback. However, as simulation sessions are costly, require staff to be absent from clinical duties and can only train a limited number of participants, the applicant proposed developing a bespoke simulation tool.

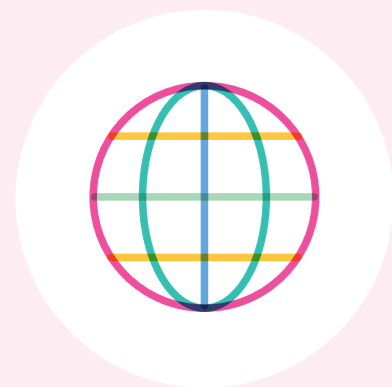
**Den's Response:** Provided funding to develop an innovative digital gaming simulation tool, which supports staff training needs through maximising the use of technology. This virtual, avatar-based platform will provide staff in anaesthetics with flexible, accessible training to enhance their knowledge and prepare them to manage life-threatening maternal anaesthesia crises.



## Safer Lung Cancer Surgery

**The Problem:** Patients with lung cancer may undergo surgery to remove their cancer and surrounding lung. Often this surgery requires a pathologist to examine lung cancer tissue under the microscope whilst the patient is anaesthetised. This assessment can determine how much lung is removed; however, this assessment can add 30 minutes to the length of an operation. Longer operations are associated with worse outcomes in lung cancer surgery. Most of the time required for this assessment involves tissue preparation. The applicant proposed reducing this time by using a novel technology (The Histolog Scanner) that directly scans tissue and could reduce the time required for an intraoperative pathology assessment to only 10 minutes.

**Dens' Response:** We provided funding to lease a Histolog Scanner for 6 months to allow the team to evaluate 40 cases in parallel with its current practice to assess accuracy and impact on operation duration by using this innovative technology. Subject to the outcome of this evaluation, a business case will be developed for the purchase of a histology scanner.



## AI Hub

**The Problem:** The rapid development of AI technologies represents a paradigm shift in how IT services can enhance the delivery of safe and efficient healthcare for patients. However, because of its rapid emergence on the commercial market, there is very little accepted wisdom around how to safely integrate these technologies into clinical settings. To help address this challenge, the applicant proposed the creation of a dedicated team to support staff with the planning, testing and implementation of AI-based products.

**Den's 's Response:** We provided funding to fully understand how to resource an AI Hub, which includes supporting two brand new projects and their implementation. The primary deliverable of the project will be to develop a business case to recurrently fund the AI Hub as a long-term service.

As the Dragons' Den is firmly embedded within STH, this will remain the funding call through which SHC supports innovation at STH. The charity will also be exploring the feasibility of replicating this support across SHSC.

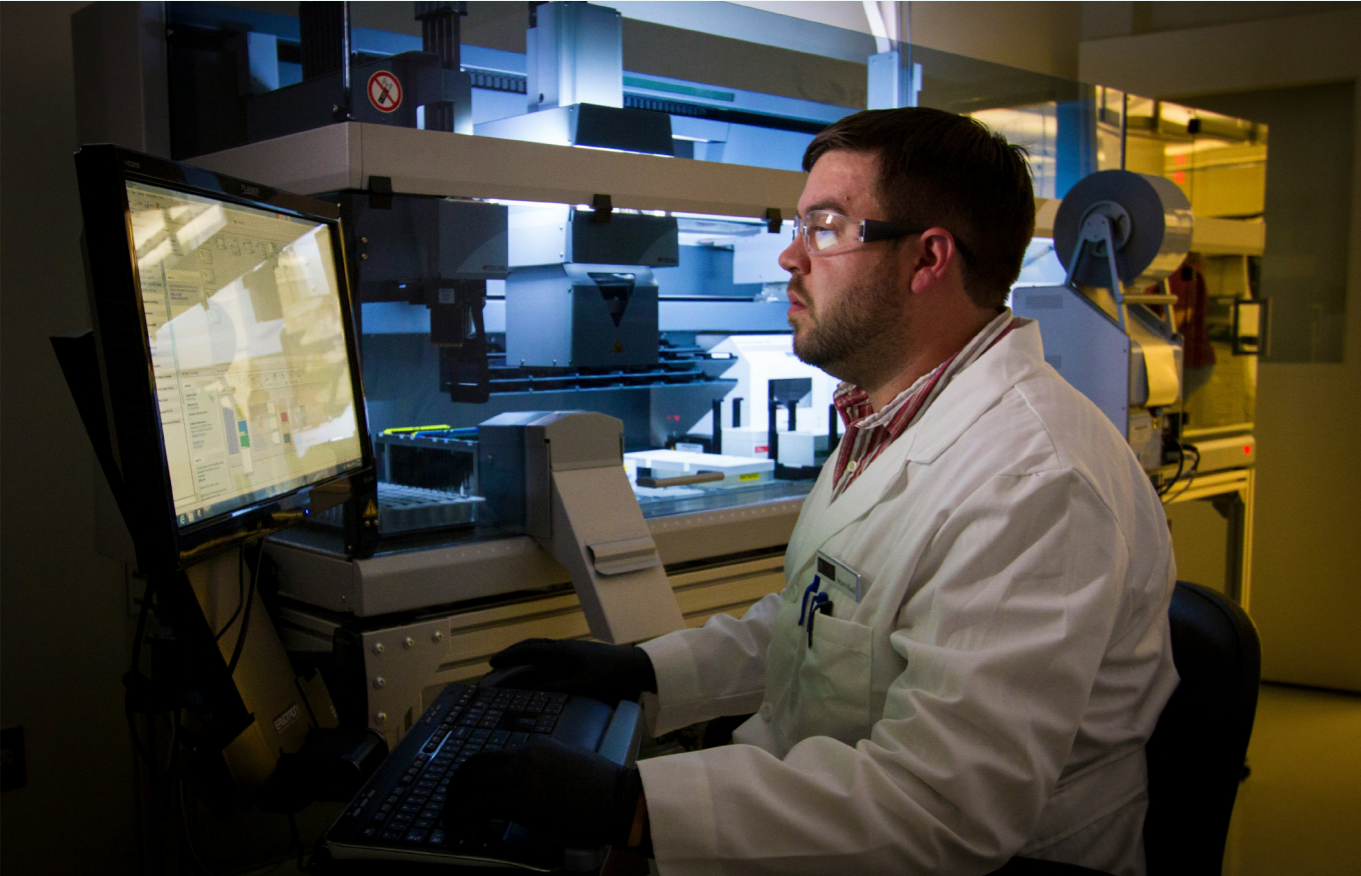
The remainder of this Strategy will focus on how we support research across both STH and SHSC.



## Examples of Previous SHC Research Funding

Prior to establishing clear funding priorities, SHC was an engaged but reactive funder in its support of research. Over the past 10 years, with research grant awards surpassing £5 million, we have funded a range of projects that have delivered significant benefits to patients, families, and staff.





## Supporting Patients Living with Prostate Cancer

**The Problem:** Prostate cancer is the most common cancer in men. If the cancer stays in the prostate, it can be treated. However, sometimes the cancer spreads to the bones, which is painful and incurable.

**SHC’s Response:** Funding was provided to research the possibility of using an existing drug to block the process which allows the cancer to spread through the bloodstream out of the prostate and into the patient’s bones. This new approach is still in the early stages but the team intends to evidence success in the laboratory to build a sufficient evidence base to progress to clinical trials.



## Supporting Patients Living with Multiple Sclerosis

**The Problem:** Multiple Sclerosis (MS) is a chronic immune-mediated disease affecting the brain and spinal cord; the immune system attacks nerves, leading to severe disability. MS is the leading non-trauma cause of disability in young people. There is no cure or treatment to reliably reverse the disease, but there are therapies such as disease-modifying treatments and stem cell transplants which can often help slow progression. However, these treatments can have significant side effects and may not always be effective.

**SHC’s Response:** We funded research to study the immune systems of patients undergoing the two most common types of MS therapies. The goal is to develop markers that can predict treatment success or failure, allowing for better-informed decisions before exposing patients to potential risks.





## Supporting Nurses into Research

**The Problem:** High quality nursing research, combined with the support to innovate and use evidence in practice, enables nurses to develop new knowledge and nursing practice to transform patient care. However, the well-developed support structures which are in place for doctors and dentists are not in place to support for nurses, midwives and allied health professionals (NMAHPs).

**SHC's Response:** Over the years SHC has supported several nurses to undertake research, whilst maintaining their clinical duties. This has resulted in enhanced patient care, increased involvement in national research, new research income, and greater partnership working with both Universities.



## Supporting Patients Living with Myeloma

**The Problem:** Myeloma is a blood cancer which can cause damage to bone in up to 90% of patients. Myeloma bone disease (MBD) results in holes and weakness within bones. There are very few bone-targeted drug therapies to improve outcomes, leaving patients with long-term challenges, including chronic pain and a poor quality of life.

**SHC's Response:** SHC provided seed funding to allow the research team to characterise bone porosity in MBD by identifying the changes seen when myeloma cancer cells are present in the bone environment. This project has allowed the team to understand more about why MBD occurs and, crucially, how best to treat it.

This project is also an example of how SHC has supported early career researchers with principal lead (Rebecca Andrews) commenting:

*“Not only has this grant helped progress research but it has also been a rare and hugely valuable opportunity for me to bring in my own research funds at an early stage in my career, which has opened doors to me taking more senior steps forward in my clinical academic career”.*



## Clinical Academic Training Manager (CATM)

**The Problem:** Health Education England's Clinical Academic Careers Framework proposes an over-arching structure to develop the clinical academic workforce for patient benefit. It recognises the need for a clear and transparent clinical academic career pathway for all healthcare professionals in England to overcome the traditional barriers that limit the involvement of nurses, midwives and allied health professionals (NMAHPs) at all levels of research activity. A key part of the success of the internship programme is the support provided by a CATM, which is only available to doctors and dentists, funded by the NIHR.

**SHC's Response:** We provided funding for a CATM for two years, mirroring the support available to doctors and dentists. The CATM provided hands on support; guiding successful candidates through the process of developing and registering their proposals, and ensuring the interns have an appropriate support network around them, with carefully selected supervisors and mentors matched with the individuals and their projects. Our funding allowed the team to demonstrate its benefits and is now a role funded by STH.



## Supporting Patients Living with Facioscapulohumeral Dystrophy (FSHD)

**The Problem:** FSHD is a prevalent form of muscular dystrophy that affects both children and adults, significantly impacting their quality of life. Currently, there is no treatment or cure. As new treatments enter clinical trials, it is crucial to understand the natural progression of FSHD in the absence of treatment. This knowledge is vital for developing outcome measures that can assess the effectiveness of treatments in clinical trials. However, creating these outcome measures requires well-designed natural history studies.

**SHC's Response:** We provided funding to test several existing and innovative outcome measures in a group of thirty FSHD patients in the UK. The study will assess muscle strength as an indicator of disease progression and collect patient-reported data on health changes. The findings will help develop new outcome measures for clinical trials and offer a thorough understanding of the UK FSHD cohort, highlighting changes that matter most to patients.

Caption: Presentation of Centre of Clinical Excellence with Research Award to the neuromuscular team at Sheffield Teaching Hospitals NHS FT



## Supporting Women Experiencing Pre-Eclampsia

**The Problem:** Pre-eclampsia is a serious condition that develops in the second half of pregnancy, causing high blood pressure, swelling, and protein in the urine. Symptoms include headaches, changes in eyesight, and stomach pain. If not detected early, it can lead to seizures. Pre-eclampsia can also harm the baby. Women at risk are given aspirin to reduce the risk of early pre-eclampsia, but it doesn't help with late pre-eclampsia (after 37 weeks). Current methods to predict pre-eclampsia, such as blood tests, are inaccurate, missing around half of those at risk, and only identify early cases.

**SHC's Response:** We funded a pilot study to test the blood of a sample group of pregnant women, including those with early pre-eclampsia, late pre-eclampsia, and healthy pregnancies. The research team will examine blood markers and clotting patterns to better detect pre-eclampsia. By identifying the condition earlier, we can ensure women receive the right care faster, protecting both mothers and babies.



## Future Research Funding

**Our approach is to support research applications which align with our funding priorities and yield clear, near-term benefit. SHC has four funding priorities:**



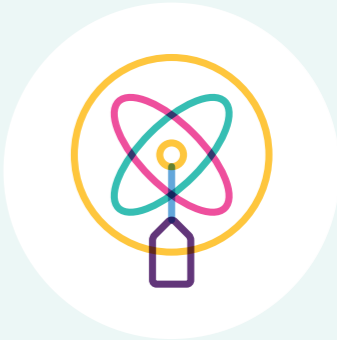
**Supporting patient centred experiences**



**Supporting caring and cared for staff**



**Reducing health inequalities in Sheffield**



**Maximising technology, research and innovation**

# Funding Categories

SHC recognises that robust support of research requires a multi-faceted approach. We will be providing three categories of funding support:

- 1. Research projects that meet a clear patient need: Particularly interested in research (life and social sciences) that will strengthen clinical services in Sheffield
- 2. Developing researchers of the future: Diversifying the NHS staff and patients that are involved in strategy
- 3. Improving research infrastructure: Physical systems such as laboratories and research facilities, digital systems such as databases or platforms to store and share data and organisational systems such as research support staff and collaboration networks

In addition to falling within one of our three funding categories detailed above, all applications for funding must meet one or more of the following criteria:

- 1. Address a clear need and translate into patient benefit within 5-7 years.
- 2. Focus on areas which are facing challenges in Sheffield: we are particularly interested in receiving applications relating to cardiovascular, cancer, mental health, respiratory and neurological conditions, as well as those that seek to support the Core20Plus5 approach.
- 3. Align with Sheffield's areas of tertiary care, specialisms and/or areas which have the potential to become Centres of Excellence
- 4. Be likely to secure future funding e.g. NIHR.
- 5. Promote collaboration with partners, including universities, to raise the profile of research across both STH and SHSC
- 6. Encourage widening participation in research from across the workforce and / or patients
- 7. Support research infrastructure to build capacity that positively impacts both STH and SHSC.

# Funding Principles

When reviewing applications, we will consider how they will contribute to SHC's funding portfolio, which will comprise projects that align with the following:

- 1. Have a clear path to improved patient outcomes.
- 2. Support a broad range of clinical and medical staff to undertake research, particularly encouraging women and under-represented groups. When consultants are involved, we have a preference for projects which show how they are supporting early-career researchers.
- 3. Have the patient voice integrated across the project life cycle, with preference given to projects incorporating lived experiences.
- 4. Promote partnership working and collaboration to maximise impact.

# Outcomes

As a result of the applications we support, over the next five years we would like to see clear evidence of:

- 1. Measurable improvements in care and treatment for patients (e.g. improved pathways; reduced waiting times or length of stay; access to advanced services or specialist support; improved patient access, experience or outcomes).
- 2. Greater patient involvement in the research we support and the processes we manage.
- 3. Increased number of NIHR - or equivalent - funding opportunities for projects we have funded.
- 4. Wider participation of staff from nursing and allied health professionals' backgrounds, women and other under-represented groups.
- 5. Measurable improvements to research and innovation infrastructure of our NHS Trusts.
- 6. Increased partnership working and collaboration opportunities, including with industry.

# Applying for Funding



## Eligibility

The following people and organisations are eligible to apply to SHC for research funding:

- STH and SHSC staff, as well as those who hold an honorary contract.
- Academic staff from partner universities who work in collaboration with either NHS Trust.
- Charities and organisations who are part of the wider NHS community and where there is a direct benefit to one or both of our NHS Trusts.

# Funding Exclusions

To ensure maximum impact for patients there are some research requests that we cannot support:

1	Ancillary costs	Consumables, travel expenses, or publication costs of research that we have not funded.
2	Primarily supporting academic outcomes	Applications where academic recognition (i.e. publications in journals) and/or career progression is the principal outcome or measure of success.
3	Dependence on SHC funding	Continued reliance on SHC charitable funding to support research. We expect that over the duration of our funding the infrastructure is built to enable sustainability.
4	Profit	Projects where commercial profit is a primary rather than ancillary benefit of funding support.
5	Previously unsuccessful applications	Projects which have not been amended and/or revised that failed to secure funding from us in a previous funding call or application.
6	Better placed funders	SHC is a small regional Charity with finite resources, therefore every effort must be made to secure other external funding, where available. In addition to this, in a tie-break situation between applications of comparable merit, consideration will be given to the availability of earmarked charitable fundings, held by the relevant Directorate.

# Application Process



## Applications for Earmarked Funding

We can only accept applications submitted through our website.

Applicants seeking to access an earmarked fund (this is a fund specific to their Directorate/ area of work) can apply for funding at any point in the year.

Applications with a value exceeding £5,000 will be reviewed by SHC's Research Panel, which intends to meet twice per year.

Applications with a value of £5,000 or less will not be considered by the Research Panel. These applications will be reviewed by SHC's Grants team, with recourse to the Research Panel for advice, if required.



## Applications to Funding Calls

Applications to a specific funding call must be made within the prescribed funding window. SHC intends to manage 2 annual funding calls in support of research and innovation:

- SHC Research Call (open to both STH and SHSC- research applications only)
- Dragons' Den (open only to STH and in support of innovation projects)

SHC's Grants Investment Panel to ratify any decisions reached via either funding call.



## SHC Research Panel

The SHC Research Panel will comprise SHC staff and Trustees, together with representatives with relevant research expertise from across both STH and SHSC, and organisations from the wider community, which actively support and promote research.

All decisions of the SHC Research Panel require ratification by the SHC's Grant Investment Panel.

The Grants Investment Panel is a sub-committee of SHC, vested with the authority to award grants exceeding £5,000, up to a maximum of £5,000.

The Research Panel plans to meet twice per year.



## Get in Touch

For further information, please contact the grants team: [grants@shct.nhs.uk](mailto:grants@shct.nhs.uk)

# Thanks

With thanks to the following people who have contributed to shaping this Strategy:

**Richard Stubbs**

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**Professor Wendy Tindale**

Scientific & Innovation Director (STH)

**Professor Wendy Baird**

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