

Our NIHR Biomedical Research Centre



Our research

Our National Institute of Health Research (NIHR) Biomedical Research Centre is dedicated to translating scientific discoveries into improvements in treatment which will benefit patients at the earliest opportunity.

Operating across Guy's and St Thomas' NHS Foundation Trust and King's College London, we support world-leading researchers by providing laboratory facilities and training, as well as three clinical research centres. These facilities enable research to take place in four specific areas, known as clusters.

Cluster 1: Experimental medicine and therapeutics

The experimental medicine and therapeutics cluster supports the development of new treatments. These treatments might be drugs, or cells from your body, proteins or antibodies.

Focal points:

Cell therapy for transplant tolerance

We are testing two treatments using T-cells (which form part of our immune systems) for the first time in humans. The central aim of this research is to persuade the immune system to 'tolerate' a transplanted liver or kidney, while retaining its ability to fight off infections and cancer.

Type 1 Diabetes

We are currently testing two new peptide-based treatments for Type 1 diabetes for the first time in humans. These trials use peptides (chains of amino acids) to help prevent the immune system from attacking itself in diabetic patients.



Cluster 2: Biomarkers, co-diagnostics, imaging and devices

The second cluster's core research is on 'personalising' medicine. Biomarkers are anything that we can measure to identify whether a patient is likely to have a particular condition or a particular response to a treatment. We identify and test biomarkers that allow us to target treatments for specific groups of patients.

Focal points:

Twins research

We have the biggest adult twin registry in the UK, with over 13,000 twins registered. Using genetically identical and non-identical twins allows us to better understand the role of genetics in disease. We found that people with fewer copies of the gene *AMY1* produce lower amounts of the carbohydrate-digesting enzyme,

amylase. This may explain the greater chance of obesity in some people, but not others.



Biomarkers in heart disease

One of our cardiovascular research groups focuses on small molecules in blood, called microRNA. Decreased levels of microRNA can show whether a drug has been able to reduce the component in blood that makes it clot, helping to prevent heart disease. If the levels do not change, then that drug is not working and the doctor can prescribe another treatment.

Cluster 3: Population sciences

This cluster aims to ensure discoveries from Clusters 1 and 2 can be accessed by the local population of South East London. We aim to transform the nature of healthcare by moving towards personalised treatment and disease prevention.



Focal points:

Patient and public involvement and engagement

Patient and public involvement (PPI) is central to our aims of engaging the local population in our research activities and delivering research that meets patients' needs. Support staff help researchers to plan and facilitate the involvement of patients, carers and members of the public in the design and management of their research. We also provide opportunities for researchers to engage with local communities to raise awareness of their research activities.

Air pollution

The South East London Air Pollution Project supports members of the local community to plan and carry out air pollution research in their neighbourhoods. The project aims to raise awareness of air pollution, engage local people in research and modify behaviour to reduce personal exposure to air pollution. The ultimate goal is to improve the health of South East London by reducing the risks associated with air pollution.

Cluster 4. School of translational experimental medicine

This cluster provides training and mentoring programmes, working closely with partners, such as King's College Hospital, and other healthcare-related companies.

Focal points:

Clinical fellowships

We support doctors, nurses and other health professionals to gain research experience and training. This helps them to apply for funding for research degrees and trains them in clinical research.



Training courses

We provide a range of training courses for research scientists and medical staff, focusing on the best quality methods for research that starts in the laboratory and is developed for use with patients.

We also run training courses to teach researchers the skills required to communicate with patients and the public about research, and to involve them in research design.

Further information

NIHR Biomedical Research Centre

For more information on research at our NIHR Biomedical Research Centre, please visit:

www.guysandstthomasbrc.nihr.ac.uk/getinvolved

Alternatively, contact **Laura Brannon** (public and patient involvement manager):

e: laura.brannon@gstt.nhs.uk

If you are interested in finding out more about the clinical research being carried out at Guy's, St Thomas' or Evelina London Children's Hospital, please speak to your consultant at your next appointment.

Alternatively, please visit the research section on our website: **www.guysandstthomas.nhs.uk/research**

Contact us

Pharmacy Medicines Helpline

If you have any questions or concerns about your medicines, please speak to the staff caring for you or call our helpline.

t: 020 7188 8748 9am to 5pm, Monday to Friday

Patient Advice and Liaison Service (PALS)

To make comments or raise concerns about the Trust's services, please contact PALS. Ask a member of staff to direct you to the PALS office or:

t: 020 7188 8801 at St Thomas' **t:** 020 7188 8803 at Guy's **e:** pals@gstt.nhs.uk

Language Support Services

If you need an interpreter or information about your care in a different language or format, please get in touch using the following contact details.

t: 020 7188 8815 **fax:** 020 7188 5953

NHS Choices

Provides online information and guidance on all aspects of health and healthcare, to help you make choices about your health.

w: www.nhs.uk

Leaflet number: 3900/VER1

Date published: May 2014

Review date: May 2017

© 2014 Guy's and St Thomas' NHS Foundation Trust