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### **South London NHS Genomics Medicine Centre announced**

The South London based Genomics Network Alliance, including The Health Innovation Network, has been announced as a successful bidder in the race to become a pioneering Genomic Medicine Centre, part of the ground-breaking 100,000 Genomes Project.

Today's announcement by NHS England is the result of a rigorous national selection process. It follows the Prime Minister's pledge earlier this year to establish the UK as a world leader in genetic research and to transform patient care by unlocking the power of DNA. The national programme will focus on cancer and rare diseases and will enable pioneering research to decode 100,000 human genomes, a scale not seen anywhere else in the world.

A genome is one whole set of a person's genes, plus all the DNA between the genes. Genomics is the study of the whole genome and how it works, but has also come to have a broader meaning to include the way that the genome is interpreted and the technologies that have been developed because of it.

The three-year programme, which will begin in February 2015, has the potential to transform the future of healthcare. It could improve the prediction and prevention of disease, enable new and more precise diagnostic tests, and allow personalisation of drugs and other treatments to specific genetic variants.

The Genomics Network Alliance serves a population of more than seven million people and is a partnership between several of London's leading hospital trusts and universities, two Academic Health Science Networks, a leading Academic Health Science Centre and two of the country's biggest patient organisations:

- Four NHS trusts: Guy's and St Thomas' NHS Foundation Trust, King's College Hospital NHS Foundation Trust, South London and Maudsley NHS Foundation Trust and St George's Healthcare NHS Trust.
- Two universities: King's College London and St George's University of London.
- Two patient organisations: Macmillan Cancer Support and Genetic Alliance UK.
- Two Academic Health Science Networks: covering South London (The Health Innovation Network) and Kent Surrey and Sussex.
- One Academic Health Science Centre: King's Health Partners

The four trusts will be responsible for recruiting suitable patients and their relatives to the programme, for collecting blood and tumour samples and for extracting the DNA from these samples. Macmillan Cancer Support and Genetic Alliance UK, as well as partners and networks across South London and Kent, Surrey and Sussex will help with patient engagement and communications to the public. The universities will also play a key part in genomic research and education.

**Professor Richard Barker, Chair of the Academic Health Science Network for South London (Health Innovation Network) and Chair of Genomics Network Alliance** welcomes the announcement:

“This programme will encourage increasingly personalised medicine through the development of better diagnostic tests and better targeted medicines and we are excited by the opportunity to be part of the 100k Genomes Project, contributing to the development of a lasting legacy for genomic medicine which has the potential to transform clinical care.

“The organisations within our partnership are leaders in the field of genetics, and their combined strengths and expertise across rare diseases and cancer mean we will be able to make a huge difference to the way in which rare inherited diseases and cancer are diagnosed and treated.”

**Tim Hubbard, Professor of Bioinformatics at King's College London and Head of Bioinformatics at Genomics England** says:

“The cost of sequencing a human genome has fallen a million fold since the first sequence in 2000 and can now be carried out in a single day. Now is the time to apply whole genome sequencing to healthcare, tightly integrated with research to generate better treatments and a better overall outcome for patients. With the 100,000 genomes project, Genomics England and now the creation of NHS Genome Medicine Centres the UK has the opportunity to lead in the world in the application of genomics medicine.”

**Professor Sean Whittaker – clinical lead for GNA, Consultant Dermatologist at Guy's and St Thomas' NHS Foundation Trust, Professor of Cutaneous Oncology at King's College London and joint lead for the Genetics Clinical Academic Group of Kings Health Partners** said:

“The consortium members are delighted to have been selected as a Genomics Medicine Centre and we look forward to helping transform clinical practice through genomics. The partnership recognises that our ability to deliver the 100K project and transform genomic diagnostics across healthcare in the South East depends on harnessing all the talents across our partner organisations.”

**Dr Fran Woodard - Director for England, Policy and Research, Macmillan Cancer Support**

“We are thrilled to be part of this ground-breaking work. The GNA partnership will deliver tangible benefits for people affected by cancer, ensuring treatment is targeted more effectively. In the long term this could help more people live with rather than die from cancer.”

## **Alastair Kent – Director, Genetic Alliance UK**

"We welcome the announcement and are delighted to be part of the Genomics Network Alliance. We are very pleased with the recognition that patients have a clear role in contributing to the success of the 100K Genomes Project and look forward to working with our partners to ensure the patient voice is heard and listened to."

## **Life Sciences Minister George Freeman said:**

"Our understanding of genomics is transforming the landscape for disease diagnosis and medicines research. We want to make the UK the best place in the world to design and discover 21st century medicines which is why we have invested in the 100,000 Genomes Project.

"It is great news that the Genomics Network Alliance will help us sequence genomes on an unprecedented scale and bring better treatments to people with cancers and rare diseases for generations to come."

To find out more about genomics and the 100k Genomes Project, visit:

<http://www.genomicsengland.co.uk/the-100000-genomes-project/understanding-genomics/>

## **Further Comments**

*Professor Frances Flinter, Consultant Clinical Geneticist at Guy's and St Thomas' NHS Foundation Trust said: "This is a really exciting opportunity for us to learn a lot more about the underlying causes of rare diseases and cancers. The results will lead to improved, personalised treatments for many patients and will deliver a legacy across the NHS of faster, cost effective, diagnostic genetic tests and a more highly skilled workforce."*

*Mr Nick Hyde, Consultant Maxillofacial Head & Neck Surgeon, St George's Healthcare NHS Trust and Clinical Director of the London Cancer Alliance (LCA) said: "This exciting programme will allow us to strengthen our work and further improve patient care through building on new genetic evidence and research enabling the introduction of personalised medicine. The potential to reduce morbidity and improve efficiency in the way we deliver care has hugely positive implications for patients and the health economy. By working collaboratively we can improve clinical outcomes and enhance patients' and carers' experience and quality of life."*

*Dr Gerome Breen - Senior lecturer at KCL Institute of Psychiatry, Psychology and Neuroscience and lead for rare diseases at South London and Maudsley NHS Foundation Trust – "We are very excited to be working with our GNA partners across the South East to deliver genomics medicine advances in psychiatry. We bring our existing strength in clinical informatics and biobanking in neuropsychiatric disorders to the partnership and look forward to working with our partners to deliver this ambitious programme."*

*Professor Nigel Brown, St George's, University of London - Director, Institute of Medical and Biomedical Education: "This is a very welcome announcement for the Genomics Network Alliance and for the population of South London and beyond. St George's and King's will build on this with education programmes for the whole healthcare workforce in South London that will eventually allow us to personalise the approach to treatment for patients and give our clinicians a better understanding of cancer and rare diseases."*

*Professor Peter Parker FRS Head of the King's College London Cancer Division said: "This is a formidable consortium of the Department of Health, hospital trusts, patient groups and universities working together to develop the future of cancer genomic medicine. It is so gratifying to be a part of this ground-breaking national initiative."*

## **Ends**

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