

BBSRC Genome Analysis Centre

In partnership with **EEDA** East of England Development Agency **Greater Norwich Development Partnership**



Information guide



The Genome Analysis Centre (TGAC)

TGAC is a new national centre of BBSRC established in partnership with the East of England Development Agency (EEDA), Norfolk County Council, South Norfolk Council, Norwich City Council and the Greater Norwich Development Partnership. It is located on the Norwich Research Park (NRP), an internationally significant health and life sciences cluster.

From improvement of disease resistance in crops to development of new antibiotics for tackling superbugs, the sequencing and analysis of whole organisms' genomes offers great potential in helping to address many of the challenges we face today and in the future.

TGAC – Cutting-edge Science and State of the Art Technology

TGAC represents a significant investment in the latest range of genome sequencing and bioinformatics technology. TGAC will operate next-generation sequencers and will build a team of bioinformaticians who will interpret the mass of data generated, develop new methods for analysis, and integrate multiple types of data that together describe biological systems.

TGAC – Impacts

By combining understanding of genetic makeup with the latest computational techniques, TGAC offers huge potential for long-term contribution to the UK's economic and social wellbeing.

Possible economic and social impacts from TGAC research activities include:

- **Improved food security – knowledge about crop genomes could help to increase yields.**
- **Disease-resistant livestock to benefit farmers and consumers – understanding livestock genomes could help in selectively breeding animals more resistant to emerging diseases.**
- **New drugs to beat resistant superbugs – genomic analysis of microbes will give us new sources of, and targets for, antibiotics.**
- **Reduced reliance on fossil fuels – sequenced genomes of energy crops will help in breeding new varieties to make sustainable bioenergy viable.**

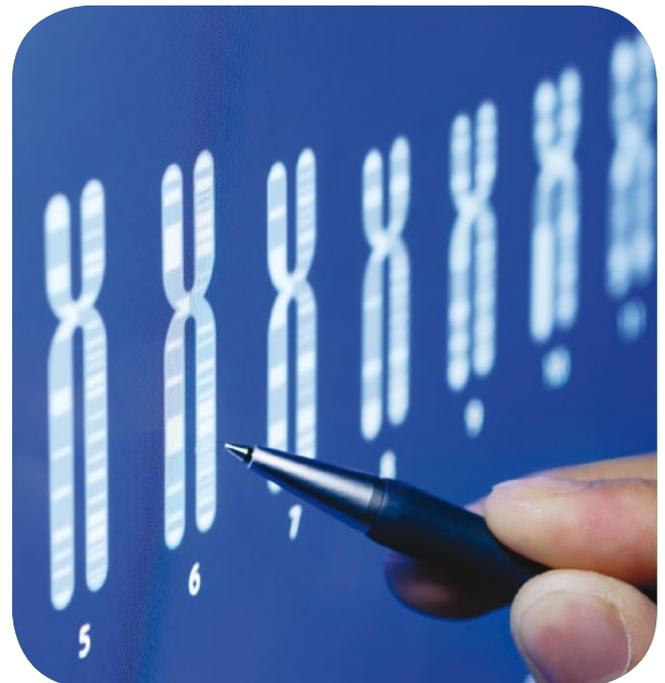
The initial projects that TGAC undertakes will be decided by an independent Scientific Advisory Board.

TGAC will become a centre of excellence in bioinformatics, attracting world-class expertise and providing training to the next generation of scientists. It will manage, process and seek to understand the vast amounts of data it produces, and work with the European Bioinformatics Institute to ensure these data are available to scientists throughout the world.

TGAC – New Opportunities

TGAC is a new national resource that builds on and extends the UK's existing capacity for genomics through sequencing and analysis of animal, plant and microbe genomes. As a centre of excellence with world-class facilities, TGAC will draw new business and industries into the area and is a major catalyst for driving forward the new Vision for the NRP.

TGAC is committed to working with partners in other institutes and universities and with international centres.



£13.5m capital investment for cutting-edge science, research and economic development

TGAC – Exploiting Commercial Potential

Maximising the commercial potential of its work is central to TGAC's mission. A dedicated role has been created to make sure that promoting industrial links and developing commercial potential are embedded in the culture at TGAC.

The centre is committed to making its facilities available to UK companies that could benefit from using advanced genomic approaches.

Norwich Research Park (NRP) – Enterprise from Innovation

TGAC will be a key component of the NRP's Enterprise from Innovation initiative. This aims to use science to drive the generation of at least 5,000 new jobs over the next 20 years.

The NRP is one of the largest concentrations of bioscience research activity in Europe. It is home to six highly-rated institutions and a growing number of businesses and employs more than 9,000 people.

The NRP is internationally recognised for excellence in research in the plant and microbial sciences, food, health, environmental sciences, computer and information systems, and chemistry. An analysis of the centres with the most highly cited scientists in the UK over the past 20 years revealed that Norwich was ranked in the top 4 cities.

TGAC – Partnerships

TGAC has been developed by the BBSRC in partnership with:

- East of England Development Agency
- Norfolk County Council
- South Norfolk County Council
- Norwich City Council
- Greater Norwich Development Partnership

Together the partners have contributed ca. £13.5m initial investment and BBSRC will be underwriting the running costs for several years. With their access to local knowledge, commercialisation agendas and business links, the Norfolk local authorities and EEDA are key to the success of the centre and the development of the NRP as a thriving centre for knowledge based jobs in the regional economy.

