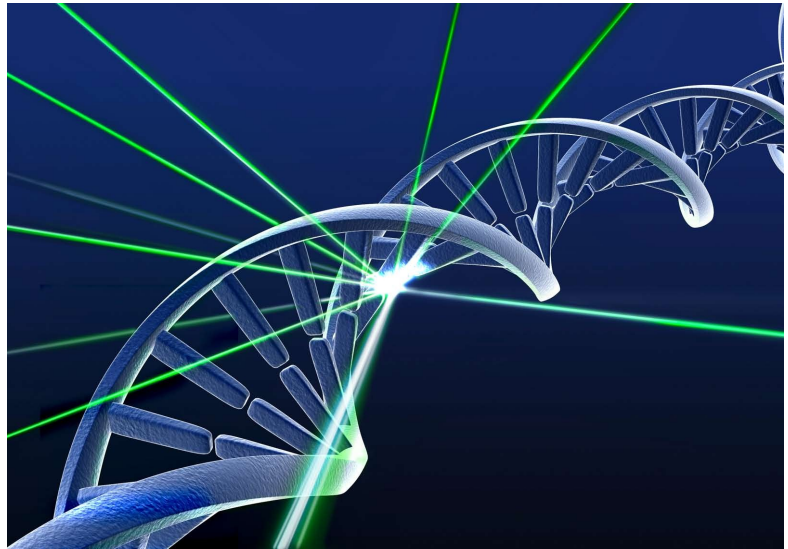


News release

New DNA sequencing research awarded BBSRC funding

Date: 25 August 2011

A new method of single molecule DNA sequencing is being developed by scientists at the University of Southampton with funding from the Biotechnology and Biological Sciences Research Council's Strategic Tools and Resources Development Fund.



The aim of the research is to create novel devices for the direct optical interrogation of single DNA strands.

The human genome contains 3164.7 million nucleic acid bases (adenine, guanine, cytosine, thymine). The DNA sequence provides information about ancestry, hereditary disease, features (such as eye, skin or hair colour) and physiological 'make-up'.

Dr Tracy Melvin from the University of Southampton's Optoelectronics Research Centre (ORC) explains: "In order to improve our understanding of genome sequences it is desirable to have simpler DNA sequencing methods. By optically 'reading' DNA directly, we hope to eliminate the complex biochemical processes currently used so that genomes can be sequenced much faster and more cheaply."

Using the new state-of-the-art fabrication facilities in the University's Mountbatten building, the multidisciplinary team from the ORC and Chemistry will fabricate nanoscale structures which will be used optically to 'read' the single DNA strand sequence.

This study will provide the first step for a new single molecule DNA sequencing method that builds upon existing expertise at the University of Southampton and will involve collaboration with Renishaw Diagnostics, which is providing material and expertise.

Ends.

News release

Notes:

1. The [Optoelectronics Research Centre](#) (ORC) is one of the world's leading institutes for photonics research based at the University of Southampton. Over the last 40 years, the group has contributed significantly to the growth of the photonics industry.

2. The [University of Southampton](#) is a leading UK teaching and research institution with a global reputation for research and scholarship across a wide range of subjects in engineering, science, social sciences, health, arts and humanities.

With over 22,000 students, around 5000 staff, and an annual turnover well in excess of 400 million, the University of Southampton is one of the country's top institutions for engineering, computer science and medicine. It combines academic excellence with an innovative and entrepreneurial approach to research, supporting a culture that engages and challenges students and staff in their pursuit of learning.

The University is also home to a number of world-leading research centres, including the Institute of Sound and Vibration Research, the Optoelectronics Research Centre, the Centre for the Developmental Origins of Health and Disease, the Southampton Statistical Sciences Research Institute and is a partner of the National Oceanography Centre at the Southampton waterfront campus.

3. The [BBSRC](#) is one of seven Research Councils that work together as Research Councils UK (RCUK). It is funded from the Government's Department for Business, Innovation and Skills (BIS).

4. [Renishaw Diagnostics Ltd](#) is a world leading provider of trace level detection technologies based on the exploitation of Surface Enhanced Raman Spectroscopy (SERS) and Surface Enhanced Resonance Raman Scattering (SERRS).

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