



The Research Complex at Harwell

Working across the life and physical sciences



The Research Complex at Harwell (RCaH) is a new multi-disciplinary laboratory for cutting-edge research in physical and life sciences.

At £26.4 million the RCaH represents a significant Government investment in science and provides laboratory space for 150 people.

The RCaH is addressing a number of important and challenging areas including:

- Biological imaging
- Drug development and delivery
- Chemical processing
- Surface and nanoscience
- Energy research

STFC is the largest stakeholder in the laboratory and the Medical Research Council (MRC) is managing the complex.

Location, location, location

The RCaH is based at STFC's Rutherford Appleton Laboratory (RAL) at the Harwell Science and Innovation Campus in Oxfordshire.

Its location is an important asset as the campus allows researchers to benefit from the proximity

of a number of facilities also on the Campus including the:

- ISIS neutron source
- Diamond Light Source
- Central Laser Facility
- Membrane Protein Laboratory
- MRC Mammalian Genetics Unit and Mary Lyon Centre

This range of state-of-the-art facilities and expertise attracts researchers from different disciplines, encourages inter-disciplinary research, produces a dynamic working environment and increases the chances of scientific advances.

Attracting Excellence

The RCaH hosts world class research groups from universities and other institutes for short and long-term projects varying in length from days to years.

One of the first occupants, Professor So Iwata, was awarded the prestigious Royal Swedish Academy of Sciences Aminoff award in 2010, reflecting the calibre of researchers attracted by the RCaH.

The Science and Technology Facilities Council

The Oxford Protein Production Facility UK (OPPF-UK) – aimed at the production of proteins for structural and biophysical studies – was the first facility to arrive at the RCaH.

The RCaH also houses STFC's Lasers for Science Facility (LSF) and the Collaborative Computing Project 4 (CCP4). The LSF will be working with RAL's Functional Biosystems Imaging team at the RCaH to develop Octopus (Optics Combined to Output Unique Solutions).

Jointly funded by STFC and BBSRC, Octopus will bring together microscopes, lasers and a supercomputer to provide a new generation of advanced imaging for biology and medical applications. It is hoped that the technique could eventually be used to predict, at a molecular level, whether a particular cancer treatment will work for a patient or not.

Inspiration inside and out

Even the RCaH building itself is inspiring. It incorporates thermal gas, intelligent lighting, solar water heaters and a 100m concrete underground earth tube.

The earth tube is part of the air conditioning system and uses the relatively constant ground temperature to preheat incoming air in the winter, or decrease the summer temperature, by 1-2°.

Energy consumption is closely monitored and users are encouraged to keep their cars at home by providing bike sheds, showers and easy access to the bus park.



Scanning electron microscope. Credit: RCaH

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