
£25m Funding Stimulates Dementia and Neuroscience Research with Siemens MR Imaging



The University of Cambridge has been awarded £25 million in funding by the Medical Research Council (MRC) to invest in a range of revolutionary technologies for experimental medicine. This enables a major investment in innovative neuroimaging technologies to identify the causes of dementia plus speed up diagnosis and treatment. This includes ultra-high power MR imaging technology such as the MAGNETOM 7T imaging system from Siemens Healthcare. Designed to identify small changes in the structure, function and chemistry of the brain even before dementia starts, the technology will help to ensure the university remains one of the world leaders in clinical and cognitive neuroscience research.

The MAGNETOM 7T will offer researchers across the University of Cambridge and Medical Research Council a major step forward in how clearly the brain is viewed. The high 7 Tesla magnetic field strength means the brain structure, function and biochemistry can be viewed with great precision, uncovering anatomic and physiological details only seen at ultra high frequency MR. It is hoped that researchers will be better able to understand how the brain works as a whole while still seeing detail at a sub-millimetre scale. The technology will be installed in the Wolfson Brain Imaging Centre, part of the Department of Clinical Neurosciences in the Cambridge Biomedical Campus next to Addenbrooke's hospital.

"Dementia has been identified as one of the largest health challenges of our time. The MRC funding has allowed us to procure innovative and cutting-edge technology to ensure we stay at the forefront of clinical research and remain one of the world leaders in this field," explains Professor Ed Bullmore, Honorary Scientific Director of the Wolfson Brain Imaging Centre and Head of the Department of Psychiatry at the University of Cambridge. "This research will aid early detection, improved treatment and the hope is it could ultimately lead to the prevention of dementia onset."

The funding is part of the Clinical Research Infrastructure Initiative which will allow UK institutions to gain access to some of the most sophisticated imaging technologies in the world to aid clinical research. It will see Government, charities, universities and industry working together to combat the biggest medical challenges the UK is currently facing. The Cambridge led research will be a major contributor to the Dementia Platform UK, which joins up medical research across the country's specialist centres to accelerate progress in dementia research.

Peter Harrison, Managing Director of Siemens plc Healthcare Division states, "The UK is home to many leading experts in the field of dementia and the MRC funding will enable them to access the very best technology to aid research into diagnosis and the development of treatments. Siemens has partnered with the University of Cambridge to provide a 7T state-of-the-art imaging system in order to identify the earliest stages of dementia. The technology will provide a new level of detail such as enhanced definition of small parts of the brainstem that are critical but difficult to see with conventional MR."

Professor Ed Bullmore continues, "Siemens offers a unique scientific capability to deliver ultra high field MR in Cambridge on a platform that can be highly integrated with our existing MR research systems in the university, our local partners in the MRC Cognition & Brain Sciences Unit and our national collaborators as part of the MRC UK 7T network. We have a long track record of working with Siemens to do research in Cambridge and many of our key national and international research partners have already committed to Siemens systems for 7T MR. That made the university confident that working with Siemens was the best way to deliver the greatest scientific value in our research."

Siemens Healthcare is one of the world's largest suppliers to the healthcare industry and a trendsetter in medical imaging, laboratory diagnostics, medical information technology and hearing aids. Siemens offers its customers products and solutions for the entire range of patient care from a single source – from prevention and early detection to diagnosis, and on to treatment and aftercare. By optimising clinical workflows for the most common diseases, Siemens also makes healthcare faster, better and more cost-effective. Siemens Healthcare employs some 52,000 employees worldwide and operates around the world.

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