



Oxford Skyline in the Winter. Photo Credit: Dr. Enikő Zsoldos.

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News Major Dementia Study Starts Recruiting in Oxford!

The European Prevention of Alzheimer's Dementia (EPAD) Consortium is a new partnership of 38 organisations working together to stop Alzheimer's dementia. In December 2017, Oxford became the first site in England to open for recruitment to the EPAD longitudinal cohort study, in a joint effort between Oxford Health NHS Foundation Trust and Oxford University.

The EPAD study investigates long-term risks for developing Alzheimer's dementia, which will allow researchers to develop more effective early treatments to slow down, or even prevent the disease.

Volunteers aged 50+ are being invited to take part in physical and cognitive tests annually, including MRI brain scans, memory and thinking tasks and spinal fluid collection. Some volunteers will

then take part in EPAD 'adaptive' clinical trials, where several treatments can be simultaneously compared and the trials modified in response to emerging results. Visit the [website](#) or if you are interested in getting involved, email: brainhealthresearch@psych.ox.ac.uk

EPAD
European Prevention of
Alzheimer's Dementia Consortium



OxDARE Scientists Receive Prestigious Prizes and Grants

In recognition for her study examining the relationship between alcohol intake and brain health in old age, Dr Anya Topiwala, will travel to Nice, France, to accept an Award Certificate, awarded by the European Psychiatric Association.



Dr. Anya Topiwala (left) and Dr Sana Suri (right).

Meanwhile, Dr Sana Suri is bound for Montreal, Canada, as a recipient of the Laszlo and Etelka Kollar Brain@McGill Graduate/ Postdoctoral Travel Award. As part of her research at McGill, Sana will be examining whether Alzheimer's disease risk factors relate to faster brain ageing. Congratulations to them both!



Cycling Down Dementia

As part of the 'Cycling Down Dementia' challenge, Prof Simon Lovestone rode his bike to Buckingham Palace to accept his knighthood.

OxDARE researchers and keen cyclists, Professors Simon Lovestone, Clare Mackay and John Geddes are taking part in the 'Cycling Down Dementia' challenge this Winter. This challenge, organised by Alzheimer's Research UK, involves cycling for 300 miles over three months while raising funds for dementia research. Along with their usual commute to work, they plan to take a few new routes, including a mass cycle to a dementia café and a brain-shaped ride around Oxford. Find out more about their fundraising efforts [here](#) or grab your helmet and [join the challenge!](#)

Science Meets Art!



During their away day in London, researchers from the Translational Neuroimaging Group (TNG) stopped by at M.Y.O London to try their hand at painting. Inspired by drawings of neurons created by the neuroscientist, Santiago Ramón y Cajal (1852-1952), each researcher painted several tiles that were then combined to form the

image, seen above. There were also a series of short talks given that day about the exciting research ongoing within the TNG. These tiles might be seen around the Oxford centre for Human Brain Activity (OHBA) very soon!

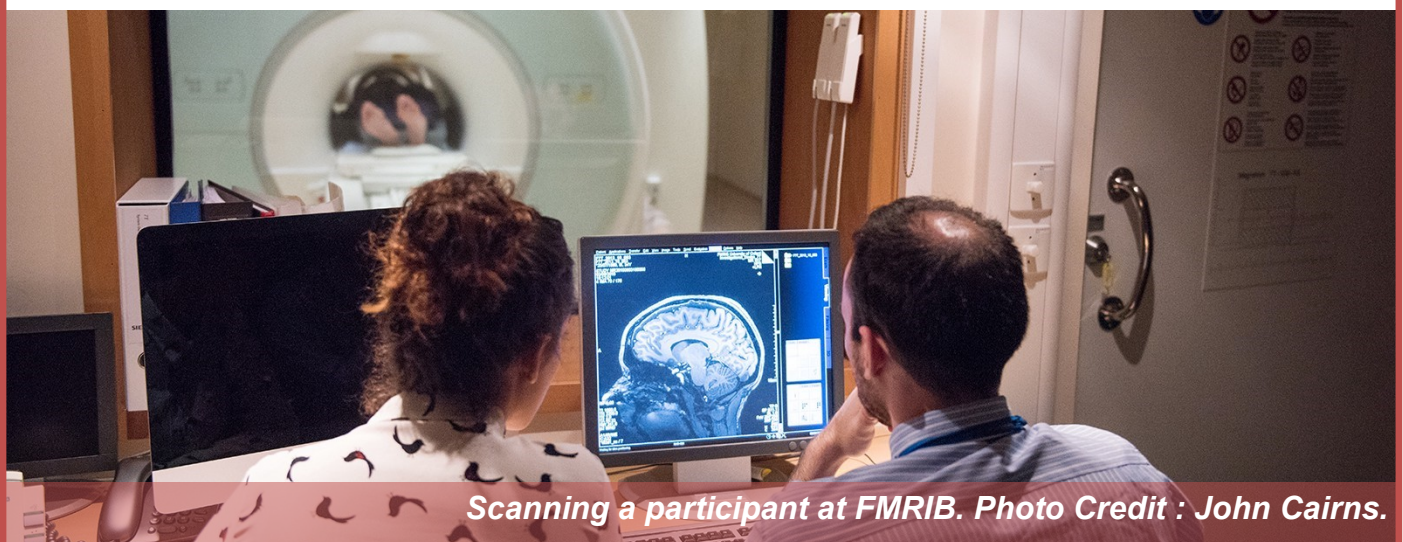


Like Humans, Dolphins Too Can Develop Dementia

A recent review led by Professors Simon Lovestone and Frank Gunn-Moore is challenging the long held notion that Alzheimer's Disease only occurs in humans. Within this comprehensive review, the authors report the results of a novel study that examined the brains of eight wild dolphins, to find that there were signs of the characteristic protein plaques and tangles commonly found in Alzheimer's disease. The team suggest that, like humans, dolphins may be uniquely vulnerable to developing this type of neurodegenerative disease, due to modifications in the way in which the hormone insulin functions within these species. These findings also have exciting implications for drug discovery in Alzheimer's Disease. In particular, genetically modified mice are regularly used as animal models of Alzheimer's disease and are essential for developing new treatments for this disorder. However, these mice often do not show the tangles that form a key feature of this type of neurodegenerative disorder. Simon suggests that 'if altered insulin signalling can make an animal more susceptible to Alzheimer's Disease, we might be able to produce mice that are a true model of the disease'. The full paper can be found in the journal of [*Alzheimer's and Dementia*](#).

What is the Link Between Lifestyle and the Brain?

As part of the well-attended Brain Diaries exhibition held at the Museum of Natural History, visitors were invited to submit questions about the brain (i.e. the 'Big Brain Competition'), with the chance of one question inspiring a study that will use state-of-the-art brain imaging to test it. Among the submissions, many were related to how lifestyle factors, including sleep and hobbies, affect the brain. Dr. Sana Suri, set out to answer some of these questions, in one of a series of blog posts written by Oxford neuroscientists, which can be found on the Oxford Medium. By conducting several interviews with researchers across Oxford (including with Dr. Christopher-James Harvey and Naiara Demnitz), Sana found that getting a good night's sleep as well as being socially and physically active, relate to higher levels of cognitive function and better measures of brain health. The particular mechanisms that support these associations are, however, still unclear. Scientists have begun to explore this in greater detail, with recent studies suggesting that the large-scale changes in the brain that are detected by MRI scanners, can be partly explained by the development of new brain cells (i.e. 'neurogenesis'), after sustained physical and mental activity. She also reports that sufficient sleep helps remove harmful proteins (e.g. beta amyloids) that have been associated with the development of neuro-degenerative diseases, which could explain why poor sleep is related to an increased risk of such disorders. There are, however, many challenges involved in running well-designed experiments looking at the *direct* effects of lifestyle interventions, including the need for control conditions (where no interventions are given), and random assignment to the intervention and control conditions. Sana also discusses several fascinating studies that the researchers are currently working on, including "Teensleep", forming the largest study to date that examines how delaying the starting time of school affect the internal body clocks of teenagers, which may have implications for their cognitive function in the morning and throughout the day. For the full blog post and more information about the research going on in this area, follow [this link](#).



Scanning a participant at fMRIB. Photo Credit : John Cairns.

Current Studies/ Opportunities

Interested in Volunteering in Research?

For opportunities to volunteer in research, please contact oxdare@psych.ox.ac.uk or visit our website and become a Friend of OxDARE, where we will email you with information about studies that you might be interested in participating in.

Become an ...Active Ageing Ambassador!

While the health benefits of physical activity are widely known, rates of inactivity remain high amongst older adults. We are recruiting ten volunteer Active Ageing Ambassadors to help us develop and deliver a workshop that aims to inform people about the latest physical activity research and inspire people to help make their communities more active. If you are interested in becoming a physical activity ambassador, or would like to know more about the role, please contact Dr. Claire Sexton, for further details. Email: claire.sexton@psych.ox.ac.uk

Upcoming Events

Brain Awareness Week (March 13th—19th)

Scientists from all across Oxford will come together to showcase some of the latest and most exciting neuroscientific research currently being conducted in their labs. While they are presently working hard to put together an exciting programme aimed for both children and adults, make sure that you attend the [weekend talk](#) (17th March, 1 – 2pm) at the Ashmolean Museum, where Dr Zoi Kapoula will discuss the ways in which museum-based research is helping us to understand our complex brain mechanisms.

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