



The Warneford Meadow during spring. Photo credit: Leona Wolters

## Contents of Current Issue

<b>News</b>	<b>2—3</b>
<i>Alzheimer's Research UK Oxford Network Centre</i>	
<i>Oxford Researchers Receive Dementia Platform UK Award</i>	
<i>Lifebrain Consortium Meeting in Oslo</i>	
<b>Research Highlights</b>	<b>4—5</b>
<i>Digital Technologies for the Assessment of Cognition</i>	
<i>Stress and the Ageing Brain</i>	
<b>Use Your Experience To Shape Mental Health Research</b>	<b>5—6</b>
<b>Current Opportunities/ Studies</b>	<b>6—7</b>
<b>Upcoming Events</b>	<b>8</b>

Alzheimer's Research UK Oxford Network Centre aims to bring together clinical and lab based researchers in and around the Thames Valley region with expertise in dementia and cognition to increase collaboration between research fields. In March 2018, the network held an information morning, open to all members of the public to share some of the exciting work being carried out in and around Oxford on dementia. We also brought together those offering support for those affected by the condition who hosted stands for attendees to visit and learn more.

This popular annual event was also filmed, and the talks are available to watch online where you can also read the transcripts and view slides:

[www.oxdare.ox.ac.uk/public-events](http://www.oxdare.ox.ac.uk/public-events) .

The network has also supported Pint of Science Events in Reading and Oxford this spring where researchers from Oxford and Reading Universities spoke about their research to sell-out crowds in local pubs. These have been a great way to start discussions about dementia with a wider audience. Pint of Science kindly allowed the funds from the sold out Oxford event to be donated to a local charity, and we selected Daybreak, who run daytime clubs in Oxford to help people live well with dementia:

[www.daybreak-oxford.org.uk](http://www.daybreak-oxford.org.uk) .

Article credit: Melanie Witt



*Dr. Ivan Koychev, Oxford University, at St Aldates Tavern as part of Pint of Science.*

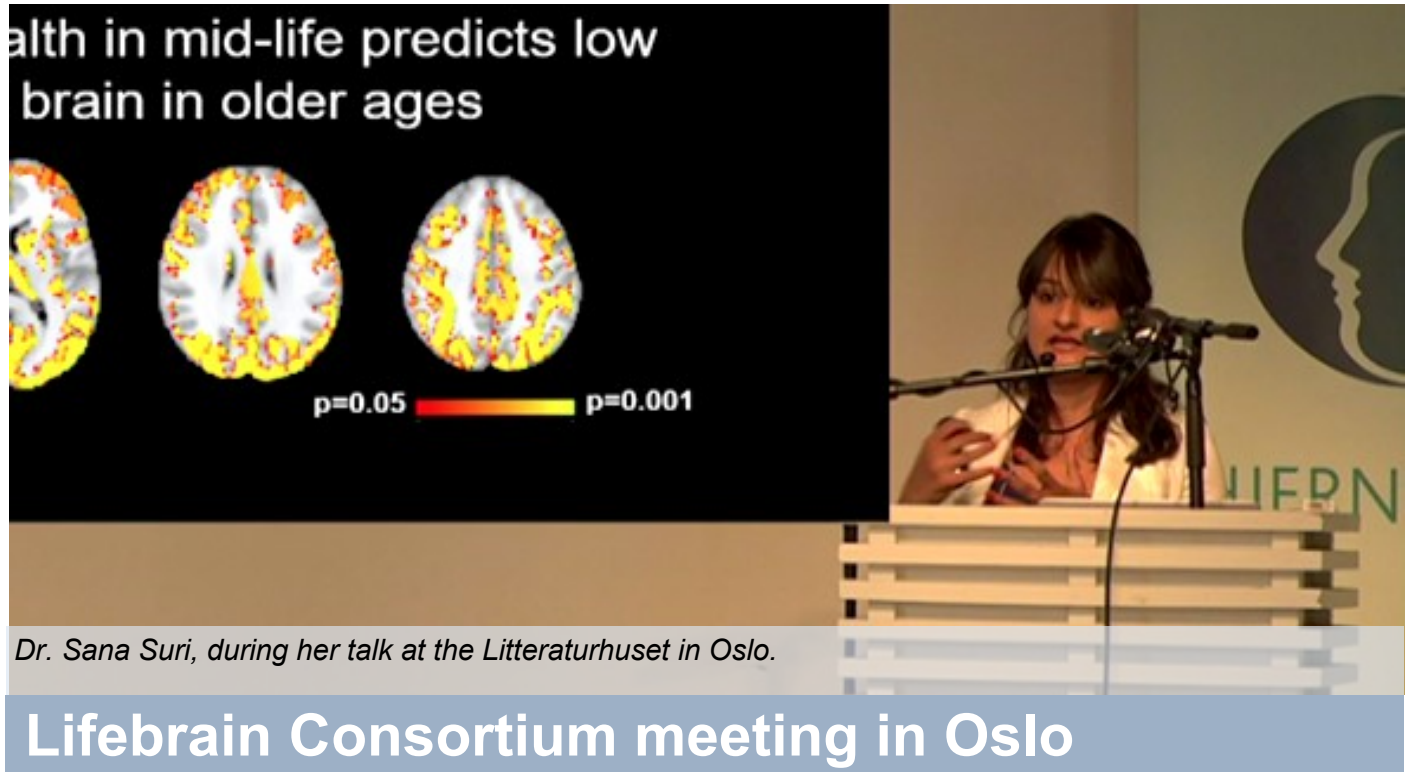
### Oxford Researchers Receive Dementia Platform UK Award

We would like to congratulate Dr. Ludovica Griffanti, Dr. Sarah Bauermeister, Dr. Chi-Hun Kim and Dr. Danielle Newby, who are among the 5 researchers to be awarded the prestigious Dementia Platform UK (DPUK) award. Each of these scientists will be using data made available through the DPUK Data portal to conduct research in the areas of ageing and dementia. Dr. Griffanti's study will particularly focus on the structural changes that occur to the brain during ageing, and Dr. Bauermeister will be investigating how childhood adversity predicts later health (e.g. the development of dementia). In his study, Dr. Kim will be evaluating how vascular factors are linked to the falling incidence rates of dementia. Dr. Newby's study will examine whether metabolic and cardiovascular disease and their treatments may be involved in the decline of cognitive performance.

For the original article and more information on the award, see:

[www.dementiasplatform.uk/news/ps200k-backs-five-new-dementia-studies-in-the-data-portal](http://www.dementiasplatform.uk/news/ps200k-backs-five-new-dementia-studies-in-the-data-portal)

Article credit: Melis Anatürk



*Dr. Sana Suri, during her talk at the Litteraturhuset in Oslo.*

## Lifebrain Consortium meeting in Oslo

The Neurobiology of Ageing group recently participated in the third Lifebrain consortium meeting, organised by the University of Oslo in the beautiful surroundings of Holmenkollen, in Oslo, Norway. They joined a team of 36 neuroscientists, physicians, psychologists, physicists, statisticians, and economists from 11 European population studies on this four-day-long meeting in June 2018. The meeting included a longitudinal modelling workshop on statistical methods, and continued discussion on data harmonisation to help Lifebrain researchers analyse the large brain imaging, cognitive and mental health datasets from over 6000 individuals. The aim of the Lifebrain consortium is to identify and understand environmental, social, occupational and lifestyle factors that influence brain health across the human life-span.

Along with statistical tool development and scientific output, the consortium places a strong emphasis on public and stakeholder engagement to promote brain health. Norway is the first country in Europe to have a national strategy for brain health, and the public shares this strong interest. The Lifebrain project leader's, Professor Kristine Walhovd's talk on a lifespan perspective of healthy brain ageing (in Norwegian), and the Department of Psychiatry's postdoc, Dr Sana Suri's talk on the benefits of physical activity for brain health (in English), were greeted by the Norwegian public with enthusiasm, as demonstrated by a full house audience at Litteraturhuset in the city centre of Oslo.

You can watch the public lectures, which was co-organised by the Lifebrain Project and the Norwegian Brain Council in Oslo, here:

[www.youtube.com/watch?v=y18kG\\_KLEJw&feature=youtu.be](http://www.youtube.com/watch?v=y18kG_KLEJw&feature=youtu.be)

or read more about the Neurobiology of Aging group here:

[www.psych.ox.ac.uk/research/neurobiology-of-ageing](http://www.psych.ox.ac.uk/research/neurobiology-of-ageing)

Article credit: Enikő Zsoldos



### Digital Technologies for the Assessment of Cognition

A recent article published by OxDARE researchers reviewed the current evidence on the use of digital technologies (e.g. smartphones, smart watches and smart homes) to improve research into cognitive (memory and thinking) decline in older adults, and provide assistance for those living with dementia. This is a rapidly advancing field, with digital developments offering new opportunities to gather long-term data on people's health, behaviour and cognitive function. Importantly, this data can be collected from the comfort of a person's own home, and fit around people's existing daily routines, providing a more realistic insight in peoples' abilities than lab-based testing.

The review highlighted a number of smartphone-based apps and wearable technologies that provide reliable measures of older people's behaviour and cognitive ability. Encouragingly, these technologies produced results generally comparable to the currently used lab-based measures.

A number of digital technologies were also identified that aimed to provide assistance, and ultimately support independent living, for people experiencing cognitive impairment. Smart homes – where digital technologies (such as motion and pressure sensors) are embedded in the infrastructure of buildings – can be used to determine potentially dangerous behaviour and provide real-time feedback to users, caregivers and doctors. For example, reminding users to turn off the stove, or providing alerts to caregivers if a person has fallen.

While most of the systems reviewed are still only in the initial stages of development, the application of digital technologies to older populations is promising; showing potential to detect and track changes in behaviour indicative of disease and support independent living. However, further research is needed to investigate the acceptability, efficacy and cost-effectiveness of integrating such technology into people's lives. To read the full review article please follow this link: [ebmh.bmj.com/content/21/2/67](http://ebmh.bmj.com/content/21/2/67)

Article credit: Jasmine Blane and Amy Chinner

## Research Highlights

A study led by Dr Enikő Zsoldos and colleagues has shed light on whether chronic levels of everyday stress (allostatic load) in mid-life may contribute to the brain's structure in old age. The researchers examined brain scans collected from 563 older adults alongside three physiological markers commonly associated with stress, stroke and diabetes, collected 20 and 10 years prior to the scan.

Overall, it was found that higher levels of these markers correlated with reduced grey matter volume, a type of tissue in which neuronal cell bodies are primarily located. The study further highlighted that only the Framingham stroke risk score, a measure that predicts the probability of a stroke occurring within the next decade based on cardio-metabolic and demographic risk factors, was linked to poorer quality of the connecting 'cables' of the brain (i.e. white matter). Although the results of this study provide some empirical support for the concept of allostatic load, Dr. Zsoldos suggests that more brain imaging studies looking at multiple stress markers are required, particularly those that follow a set of individuals over time. Such studies will provide further insight into whether stress could serve as potential targets for intervention designed to slow or prevent age-related changes to the brain.

To read the original research article, see: [www.nature.com/articles/s41598-018-24398-9](http://www.nature.com/articles/s41598-018-24398-9)

Article credit: Melis Anatórk

## Use Your Experience to Shape Mental Health Research



*Patient and public involvement is important for shaping the research ongoing at the University of Oxford.*

Learning from the real life experiences of patients, carers and the public - often described as patient and public involvement - produces better research and treatment.

## Use Your Experience to Shape Mental Health Research (contd.)

Patient and public involvement refers to research carried out with and by patients, carers and members of the public. People chose to get involved in research for a whole range of reasons. Maybe you have personal experience which you would like research to take into account. Or you would like the opportunity to develop personal skills by learning about research.

The University of Oxford is partnering with Oxford Health NHS Foundation Trust to bring the best science to the complex problems of research and dementia through the NIHR Oxford Health Biomedical Research Centre. And we need your help!

We want to build a pool of patients, carers and the public who are interested in being involved in our research, so that we can share opportunities and support people to be involved. We have worked with patients and staff to produce an Involvement Strategy that sets out the different activities we will focus on, to make sure involvement is at the heart of our research.

If you'd like to find out more how you can be involved in mental health at the Biomedical Research Centre email [Claire.murray@oxfordhealth.nhs.uk](mailto:Claire.murray@oxfordhealth.nhs.uk), or visit our website: [oxfordhealthbrc.nihr.ac.uk](http://oxfordhealthbrc.nihr.ac.uk).

Article credit: Claire Murray

## Current Opportunities/ Studies

### **Memory Replay (Ethics code: IRAS ID:124687)**

Do you remember what you did right after breakfast? Or shortly before turning on the computer? From previous studies, we know that during periods of rest, but also during active task engagement, brain regions recapitulate past trajectories. This phenomenon is called "replay". We are recruiting ten neurologically normal participants between the age of 45 and 83 for a study that looks into the importance of replay for a decision-making task. We ask for one hour of your time in a single-session screen-based behavioural experiment.

If you are interested in participating or have further questions, please contact Mr Younes Tabi by email: [younes.tabi@ndcn.ox.ac.uk](mailto:younes.tabi@ndcn.ox.ac.uk)

### **Making Study (Ethics code: 14/SC/0044)**

We are looking for people aged between 40 and 59 who have no history of neurological/neuropsychiatric conditions and who are native English speakers. The study would last approximately 6 hours and involve a series of computer based, non-invasive game like tasks to investigate social decision making, memory and learning.

For more information please contact Dan Drew on: [daniel.drew@ndcn.ox.ac.uk](mailto:daniel.drew@ndcn.ox.ac.uk)

### **EPAD Study (Ethics code: 16/SC/0074)**

We are looking for any individuals aged 50 and above, to take part in new study called the European Prevention of Alzheimer's Dementia (EPAD). It is open to anyone who is healthy (no memory problems) or to those who have a diagnosis of Mild Cognitive Impairment. It is a 4 year study, with annual study visits, to identify people who may be at risk of Alzheimer's disease who will then be invited to take part in drug trials, therefore this needs to be something you would be happy to consider.



If you are interested in hearing more or taking part, please contact the EPAD Study Team at [brainhealthresearch@oxfordhealth.nhs.uk](mailto:brainhealthresearch@oxfordhealth.nhs.uk)

### **Public Involvement Opportunity: Help Design Mobile Tasks for Use in Alzheimer's Disease**

We are looking for volunteers with a diagnosis of Alzheimer's disease to assist in the design of a smartphone-based 'app' designed to measure memory and attention outside of a clinic environment. Volunteers will be asked to demo the app and offer advice on how we can improve the app and use it to greatest benefit in research. You do not need to have experience using a smartphone to be involved - all contributions are hugely valuable for guiding us in our research design.

For more information, please contact Claire Lancaster (Tel: 01865 743893, [Claire.lancaster@bdi.ox.ac.uk](mailto:Claire.lancaster@bdi.ox.ac.uk)).

### **New Brain Health Centre – patient and carer involvement opportunities**

The Oxford Health Biomedical Research Centre (BRC) is launching a new Brain Health Centre to offer patients access to better quality diagnosis and treatment after they have been referred by their doctor for concerns about their memory.

They are advertising two involvement opportunities for people with experience of mental health and/or memory problems – as a patient or a carer – to work with them as the centre is set up.

- Patient / Carer representative on Working Group
- Members for Feedback Group

Reimbursement for expenses and time is available. Full details including how to nominate yourself for one of these roles is available on the BRC website:

[www.oxfordhealthbrc.nihr.ac.uk/help-us-develop-oxfords-new-brain-health-centre/](http://www.oxfordhealthbrc.nihr.ac.uk/help-us-develop-oxfords-new-brain-health-centre/)

## Research Highlights

### Cowley Road Carnival Festival

**Where:** Cowley

**When:** July 1st, 11 am—5pm

The annual Cowley Road Carnival Festival takes place on this upcoming Sunday. With the programme including arts, music and plenty of food stalls, this event shouldn't be missed! Look out for our OxDARE stall there too!



For details, see the website:

[www.cowleyroadcarnival.co.uk/](http://www.cowleyroadcarnival.co.uk/)

### Kidlington Fun Day Run Day

**Where:** Stratfield Brake Sports Ground

**When:** July 15th, 10am—3pm

Help raise donations for Daybreak by either taking part in a 5km race or a 1km fun run! Other attractions include a bar, stalls and activities aimed at all age groups.

To purchase tickets, see: [www.eventbrite.co.uk/e/kidlington-fun-day-run-day-5km-fun-run-entry-tickets-46318417634?utm\\_term=eventurl\\_text](http://www.eventbrite.co.uk/e/kidlington-fun-day-run-day-5km-fun-run-entry-tickets-46318417634?utm_term=eventurl_text)

### Oxford Dementia Café

**Where:** Oxford Options Resource Centre

**When:** 1st Tuesday of every month, 10.30am — 12pm

Run by the Alzheimer's Society, this monthly café provides those affected by dementia and their carers an informal and relaxed environment to learn more about the local support services that are available.

To find out more, visit [www.alzheimers.org.uk/](http://www.alzheimers.org.uk/) or call 01235 531989

Oxford Dementia & Ageing Research (OxDARE),  
Department of Psychiatry, Warneford Hospital, Oxford, OX3 7JX

**Website:** [OxDARE.ox.ac.uk](http://OxDARE.ox.ac.uk)

**Contact us:** [OxDARE@psych.ox.ac.uk](mailto:OxDARE@psych.ox.ac.uk)

**Follow us:** [@OxDARE](https://twitter.com/OxDARE)

