Meet the network: Dr Mark Dallas, New Academic Coordinator for the network

I am a Lecturer in Cellular and Molecular Neuroscience based within the Reading School of Pharmacy. My research focuses on cellular mechanisms of dementia with an interest in glial cells. We use a range of functional and molecular approaches to better understand the challenging physiological landscape in response to dementia. It is great to be involved in the Network and I look forward to hopefully meeting you all either at ARUK 2018 or indeed at our Network meeting in July 2018.

ARUK Early Careers Network Update by Francesca Nicholls, Early Careers Representative

2017 has been a great year for the Early Careers Network. In September, we put on our largest event to date, with over 50 attendees at our Academia/Industry careers event in Reading. The aim of the day was to hear about different career paths available to us, from research roles in pharma, biotech, government and academia to hearing about advising on policy at ARUK and managing clinical trials. We also heard about the transition to group leadership in pharma and academia. Attendees particularly appreciated the panellists' candour – I think we got a refreshingly honest insight into everyone's roles, and touched on issues such as gender and mental health. We concluded the event with Elizabeth Adelodun interviewing Simon Lovestone, and having a poster session to share our research.

ECR Reading Careers Event

As we move into 2018 the Early Careers Network would like to take this opportunity to thank Mark Dallas for all his hard work as a founding representative, helping to create a vibrant community. In his place we welcome two new representatives, Laura Thei and Tim Johanssen from Reading and Oxford Universities, respectively. Laura and Tim are neuronal cell biologists with their research focused on the causes of Alzheimer's disease. Along with Francesca Nicholls, we're looking to carry on the successes of this year beginning with a social in Oxford to launch the ECR website on Friday 19th January. In the middle of the year the Pint of Science talks by Oxford/Reading scientists will be a feature in our calendars from the 14th – 16th of May. Lastly, we aim to follow on from the success of this year's Career day with an Early Careers Network day in Oxford in the autumn.

Diary of events

- 21st World Congress on Neurology and Therapeutics, 15-17 March 2018, London
- 2018 Alzheimer's Research UK Conference, 20-21 March 2018, London
- 9th annual Neuroscience Symposium, 21 March 2018, Oxford
- Protein misfolding in ageing and neurodegeneration: from basic biology to drug development, 26-28 March, London
- Monitoring Molecules in Neuroscience, 25-28 Mar 2018, Oxford
- High Content Imaging of Stem Cells Meeting, 27 March 2018, Edinburgh
- 2018 Alzheimer's Society Annual Conference, 22-23 May, London
- Alzheimer's Disease Research Methodology, 11-14 June Edinburgh

Network News

A few reflections on the second birthday of the ODDI By Elena Di Daniel, Head of Biology, ODDI

As the snowflakes are gently falling, a few reflections come to mind on the past year, which is the 2nd birthday of the Alzheimer's Research UK Oxford Drug Discovery Institute (ODDI). It is exciting to think that the team has now grown to 22 members, talented biologists and chemists, with the sole mission of bringing novel therapeutics to patients with dementia. Being in Oxford has allowed us to build bridges with other world class academic groups. We are pleased to have established a number of collaborations, in particular within the Target Discovery Institute (TDI), the ARUK network, with the Structural Genomic Consortium (SGC) and the Oxford Parkinson's Disease Centre (OPDC): we are extremely grateful for their generosity in sharing reagents and initial data with us. These bonds are allowing the Oxford Drug Discovery Institute to investigate novel ideas and assess their potential as therapeutics. We are fortunate to have been approached by several pharmaceutical companies, who have demonstrated a keen interest in collaborating on a novel drug discovery model, in line with current academic research within the network.

It seems we have created a solid foundation for a drug discovery institute, and next year we look forward to progressing our projects, hopefully in the form of small molecules with the potential to become new drugs which could cure or prevent dementia. We also look towards continuing to develop our relationships with our existing collaborators, as well as forging new partnerships. As ever we are grateful to Alzheimer's Research UK for creating these opportunities, and are optimistic that we possess the right tools and are in the right place to make an impact on such complex diseases underlying dementia. I am reminded of the phrase 'Per aspera ad astera', 'through hardship to the stars'.

Please do get in touch with elena.didaniel@ndm.ox.ac.uk if you are interested in working with us.

Have a very Merry Christmas and a happy Festive Season.

ARUK funded research in the network: Colin Akerman, Oxford, (PhD Studentship) Investigating the effect of ApoE genotype on synaptic dysfunction using sporadic Alzheimer's disease patient iPSC-derived cells (2015-2018)

The objective of this ARUK funded PhD studentship is to use human cells derived from induced pluripotent stem cells (iPSCs) in order to investigate why the Apolipoprotein E (ApoE) allele is a genetic risk factor for Alzheimer's disease (AD). Astrocytes are the primary source of ApoE in the brain, but it is not clear how this links to the loss of synaptic connections between neurons, which is an early hallmark of cognitive decline in AD. We are establishing a novel in vitro system that combines human astrocytes and neurons from different patients. We are using this to investigate how astrocyte isoforms of ApoE exert different effects upon the formation and maintenance of synaptic connections between neurons. About the Akerman Group.

Outreach News

Dr Claire Sexton from the University of Oxford's Department of Psychiatry, has won the 2017 Early Career Researcher award for her work promoting healthy ageing in the brain. The awards recognise and reward high-quality engagement activities and contribution to building capacity in this area.

Claire has engaged the public with research through delivering Dementia Friends Information Sessions supported by the ARUK Oxford network centre, and public talks about her research, film screenings of the documentary "The Age of Champions", and through her work as Founding Chair of Dementia Friendly Chipping Norton. Dr Sexton has also built capacity for public engagement, encouraging, training and enabling other researchers at Oxford to take part.

Dr Sexton has delivered Dementia Friends Information Sessions to over 900 people, with the aim of increasing awareness about dementia and how healthy brain ageing can be encouraged through non-pharmacological means.