Welcome to the 2016 CCACE Research Day, our 9th. In CCACE, you’re good at doing what you said you’d do, and then delivering extra. In our recent mid-term report to the Medical Research Council’s Neurosciences and Mental Health Board, CCACE more than delivered on its aims. Those included: to publish important reports; originate new projects and collaborations; raise additional funding; train new students and staff; and conduct a variety of knowledge exchange activities. In a wholly-positive response from the MRC Board, we were told that,

“The Board warmly recognised the unique contributions of the Centre’s research to both UK and global understanding of cognition and aging. The quality of the Centre’s continuing output prompted the Board to suggest the development of an overview of CCACE’s organisation and design to provide guidance for newly established Centres. In addition to the valuable collection and coordination of cohort data on cognitive aging, the diverse and interactive expertise brought to the research projects was seen as a key asset to be supported. Acting Board chair Professor Patrick Chinnery provided a personal account of his visit to the Centre. He was able to give an enthusiastic account from the presentations given of the highly productive work.”
being done and the interactive collaboration of researchers. He had also developed a favourable opinion concerning sustainability planning for the Centre from his visit. The Board requested an exploration of mechanisms to support the continuation of the infrastructure provided by the Centre to be carried out within the next two years."

Meeting the UK Biobank challenge
The theme of this year’s Research Day is resilience. To find out how resilient—or just how good—a system is, it sometimes needs a big challenge, a dunt. CCACE had one with the release of the UK Biobank’s first tranches of genotyping and brain imaging data. Our response was to hit our apogee. These data-challenges resulted in useful fusion of CCACE’s groups, especially the Cognitive Epidemiology, Individual Differences, Genetics, and Brain Imaging Groups. The discoveries in the genetic architecture and mechanisms of intelligence, education and personality traits were substantial. And just as impressive were the cognitive-health and neuroticism-health genetic associations that our members discovered, as was the definitive work done on how age affects the white matter of the brain. When we stated that a part of CCACE’s work in the second quinquennium would be to extend Cognitive Epidemiology to Genetic Cognitive Epidemiology, we hadn’t the temerity to dream that we’d have such a windfall.

From the moment the second CCACE quinquennium’s (2013-2018) application was drafted, a part of that was a carefully-planned succession process. The plan stated that there would be a hand-over period in the last two years, from 1.9.2016, and a new Director from 2018. We’ve got the ideal Director-designate in Andrew McIntosh. We’ll not summarise Andrew’s CV, but will say that he’s got the right interests, impressive publications, big-grant-getting record, team-building credentials, and personal qualities. He can keep CCACE’s members together and can extend its interests, so that it stays fresh. Please read this carefully, though: Ian is not going away! He has many jobs to do, post-2018: Directing the Lothian Birth Cohorts, and working on STRADL, Healthy Ageing in Scotland (yes, HAGIS), Generation Scotland, Dementias Platform UK, etc.

The evolution of CCACE
The last 2 years have seen CCACE continuing as one of the most prolific and highly-cited centres at the University of Edinburgh, bringing together expertise in psychology, medicine, epidemiology, neuroimaging, and genomics, as well as many contributors from the UK and around the world. As you will see at the research day, there have been many major publication successes, new graduates and appointments, and a continuing commitment to excellent education and public outreach.

We think that our best days and greatest achievements are ahead, because we will build on the accumulated expertise and collaborations. Many of our successes now provide a platform to make deeper insights into the nature and causes of cognitive ageing and resilience, and to the association between personal traits and health. That effort begins right now with a renewed vision for the future.
CCACE has identified many of the genetic and environmental correlates of cognitive ability, neuroticism and depression, and the ageing process. CCACE’s challenge now is to exploit these discoveries and try to understand the mechanisms underlying these associations and how they influence human health and disease.

Over the next five years we will provide a better mechanistic understanding of cognitive ability, personality, and depression as well as their trajectories over time. We will build upon core strengths such as individual differences psychology, cognitive epidemiology, and genomics to develop new thematic strengths in ‘causal epidemiology’, ‘systems biology’ and ‘disease modelling’ – whilst continuing our commitments to teaching, training new researchers, and public education.

We know that you share our commitment to a bright and successful future for the Centre, as it develops and gradually, and even-more-attractively, transforms into something new. We hope that you will continue with us, as we seek the types of knowledge and data that will enable us to understand ageing and resilience, and progress even beyond those to intervene and improve people’s psychological health and wellbeing.

Ian Deary, Director and Andrew McIntosh, Director Designate

Some 2015-16 Highlights from our CCACE Groups

Our recent, 2016 Mid-term report comprehensively, though briefly, summarised our achievements and plans during the first half of our second CCACE quinquennium. Therefore, we have spared the Group Leaders and our Co-Directors from having to write that again, and you from reading it. We did, though, invite them to mention a few recent highlights from 2015/2016.

Co-Director Professor John Starr writes...

The continuing funding and success of CCACE was instrumental in obtaining a second phase of funding from Alzheimer Scotland to continue the sister centre, the Alzheimer Scotland Dementia Research Centre, for a further five years to 2021.

The two clinical research fellows, Drs Jenni Harrison and Katherine Walesby, jointly funded by CCACE, have both made great progress in their first year, obtaining external funding and setting up exciting collaborations. Jenni has been awarded two grants from Scottish Government Data Analytic Division, and Edinburgh & Lothians Health Foundation for her work on care home experiences for older people. Katherine was awarded a travel grant to spend four weeks at the National Institute for Stroke and applied Neurosciences at Auckland University, New Zealand in early summer this year. She was awarded the grant to support a new project which she designed and forged collaborations with New Zealand researchers and clinicians in Auckland and Wellington. Clinical research fellow, Dr Ruth Sibbett, has returned from maternity leave, and is making good progress with determining dementia...
outcomes in the LBC1921 and LBC1936 cohorts which is proving invaluable for disentangling normal cognitive ageing from early dementia in these cohorts.

Another example synergy is the LBC1936 Brain Tissue Bank, lying within CCACE, which provides rare, extremely well-characterised 'normative' data with which to compare the non-normative findings from the Scottish Dementia Brain Tissue Bank, overseen by the Alzheimer Scotland Dementia Research Centre.

Professors Catharine Gale and David Batty write...

With UK Biobank data we carried out a series of analyses in order to investigate mechanisms underlying links between cognitive ability or negative emotions and later health. We found that there is a substantial level of pleiotropy (when one gene influences two or more seemingly unrelated phenotypic traits) between cognitive abilities and many physical and mental health outcomes. There is also significant pleiotropy between neuroticism and several health outcomes, particularly depression and schizophrenia. We examined the role that neuroticism played in the well-established distress–mortality relation and showed it had no explanatory effect.

We showed that higher intelligence in childhood is linked with a reduced risk of physical frailty and lower allostatic load at age 70 in the Lothian Birth Cohort 1936. We showed for the first time that higher levels of inflammation may play a role in suicide, and that even mild to moderately distressed individuals have an increased risk of accidents. The London based Whitehall II Study provides perhaps the longest mortality surveillance of those cohort studies of adults with an assessment of personality type. Using this data we found no associations between neuroticism or extraversion and cause-specific mortality.

Professor David Porteous writes...
The summer of 2015 will remain etched on the memories of the CCACE Genetics Group for a long time to come. The reason? The first tranche of UK Biobank (UKB) genotyping data was released on 8th June 2015. This represented an unprecedented scale of one off data release, some ~800,000 genotypes for each of ~150,000 participants. The task for the group was to be first past the post for as many of the CCACE relevant traits as possible. It was all hands on deck (or desktop) for the best part of the summer for the primary studies – Manhattan plots of genome wide association and polygenic risk score analysis and cross-trait correlation. The net outcome was a clutch of major papers drafted and submitted by this time last year. This collective effort was recounted by the Director, Ian Deary, at the 2015 Research Day at which point the key discoveries could be summarised, but most of the papers were still in final preparation or under review. A year on and five are published, two more are in press and a further three are available through bioRxiv. Still more papers are under review or in preparation, and in unexpected directions. With regard to educational attainment, the UKB data strongly support the influence of genetic factors, contrary to traditional socio-political views.
Others may make your hair stand on end, or rather give 125 reasons why it may terminally decline if you are a man (Figure). Perhaps fittingly, the latest paper on bioRxiv is on the genetics of tiredness. In the meantime, CCACE has invested in the hardware and software to scale up for the next release.

Congratulations to PhD student Saskia Hagenaars who, in recognition of her stellar work on these data and first author paper in Molecular Psychiatry was awarded the 2016 Sir William Darling Memorial Prize, to be presented by the Chancellor, the Princess Royal, at a reception at Holyrood Palace (also see p16).

Professor Robert Logie writes...
I have recently begun work on a new grant from the Economic and Social Research Council (ESRC) entitled ‘Working memory across the adult lifespan: An adversarial collaboration’. This is a multi-Centre grant with my Co-Is being based across the world in the University of Missouri-Columbia, USA, University of Fribourg, Switzerland, and University of Geneva, Switzerland. It will examine theories of working memory from two opposing sides of the argument.

Stephen Rhodes, one of our CCACE funded PhD student was awarded his PhD in July 2016. He produced an accomplished piece of work on working memory. Just a few weeks after his viva he took up a post-doctoral position at the University of Missouri-Columbia as a member of my ESRC grant research team working with Professor Nelson Cowan.

2015/2016 also brought a new collaboration for the team to work on potential cognitive interventions. This is funded through a British Academy Newton Fellowship for Dr Weng-Tink Chooi from Universiti Sains, Penang, Malaysia. A new collaboration was started by Professor Della Sala with the University of São Paulo, Brazil. They will examine cognitive markers in people with low education and who are illiterate.

Professor Joanna Wardlaw writes...
Imaging is a great focal point for translation of CCACE research from lab to patient benefit. For example, different groups in the Section are closer to unearthing the complex mechanisms underpinning small vessel disease in experimental models, which we are translating to DNA and mRNA analysis in local and now worldwide human consortia studies. We show that early life factors (intelligence, socioeconomic status and education) not only increase the risk of stroke in later life, but also of structural brain changes that can lead to cognitive decline, more strokes and dementia. Methods are now established to map the connections in the brain to discreet brain regions, which we have done in the Lothian Birth Cohort (Figure) and now permit comparison with a range of other variables including cognitive abilities, general health, early-life factors.
**Connectomics in the human brain:** Graph theory model developed from structural and diffusion tensor brain magnetic resonance imaging at 1.5T of an LBC1936 participant showing the structural connectivity of the brain as represented by nodes (grey matter regions) and edges (white matter connections). Image courtesy of Dr Stewart Wiseman and Dr Mark Bastin.

With CCACE pilot funding, we have now established the procedure to track longitudinal changes in life with brain imaging, to detailed ex vivo brain samples, to exceptionally detailed immunohistochemical, synaptic and electron microscopy findings.

Further advances in healthy ageing and common disorders of later life will benefit from the new 3T brain-optimised MR scanner installed in the Royal Infirmary as of September 2016, the 3TMR-PET scanner installed in the College of Medicine’s main research institute (QMRI) as of August 2016, and substantial increase in imaging expertise through new neuroradiology, medical physics, image analysis and related appointments.

**Professors Alasdair MacLullich and Megan Holmes write...**

CCACE member Joyce Yau’s recent findings include: (i) short-term treatment of aged memory-impaired mice with a novel 11ß-HSD1 inhibitor reversed the memory deficits; (ii) 11ß-HSD1-deficient mice were protected from the effects of chronic stress on memory decrements; (iii) and 11ß-HSD1 deficiency or inhibition in mice impaired contextual fear memories.

CCACE member Karen Horsburgh and colleagues have found that sustained hypoperfusion leads to gliovascular alterations and cognitive impairment, mimicking features of cerebral small vessel disease. These changes are seen in human brains post-stroke with dementia. This work suggests that chronic hypoperfusion may be one of a number of stimuli that can trigger changes in microvessels that mimic small vessel disease. Studies on agents that may prevent these degenerative changes and improve cognitive abilities are progressing.

Co-Group Leader, MacLullich and his team have found: that, in a tauopathy mouse model of dementia, acute peripheral inflammation affects trajectories of neurodegeneration; novel relationships between delirium and CSF biomarkers (e.g., neopterin); and that brain atrophy on CT predicts delirium risk in stroke patients. A newly-funded study of 3000 CT scans in patients assessed for delirium, to see if markers of white matter disease and atrophy predict delirium risk.

Co-Group Leader, Holmes, and her group found that increased exposure of the fetal brain to glucocorticoids results in specific cognitive impairments. This group has also been innovating functional MRI in awake animals while they are carrying out cognitive tasks. This allows correlation of behavioural information with brain network activity to pinpoint brain regions that underpin the cognitive dysfunction, using a direct translational technique.
Individual Highlights from our CCACE Core Staff

Michael Allerhand: Statistician
The Longitudinal data analysis course and R course were run again with excellent feedback. I have just (31st August) presented an adaptation of the R course to an international audience at the Federation of the European Societies of Neuropsychology Summer School in Berlin where I was an invited speaker.

Devasuda Anblagan: Brain Imaging Research Fellow
A highlight was representing Edinburgh Imaging and CCACE to present my research work at the International Society for Magnetic Resonance in Medicine’s (ISMRM) 24th Annual Meeting and Exhibition in Singapore in May this year.

Gail Davies: Genetic Statistician
Top of the year was being part of the team that worked on the recently-released UK Biobank genetics data and discovering new brand-new associations with cognitive functions, personality and health, including seeing the first lot of results come through after eating pizza in the office at 10pm!

Chloe Fawns-Ritchie: Cognitive Testing Development Officer
A highlight was attending and presenting on the links between genetics of Alzheimer's disease and cognitive functions at the Alzheimer's Association International Conference in Toronto. I also managed to squeeze in a 5 kilometre fun run on my trip!

Sarah Harris: Geneticist
A highlight was publishing our paper which shows that genes that influence mental and physical health also influence thinking skills (Hagenaars et al 2016, PMID:26809841).

Dave Liewald: Systems Analyst
High among the highlights was adding a new Super Node to the CCACE Cluster: ‘Mons Meg’. This has an immense 144 processing threads, 3TB RAM and a 72 TB disk. It will be used to process the UK Biobank 500K genetics data.

Robin Morton: Knowledge Exchange Officer
A highlight was filming the BBC filming the Lothian Birth Cohort 1936 study for a new BBC series on ageing called How To Stay Young and interviewing presenter Chris van Tulleken myself.
Denise Munro: Administrative Secretary
Joining CCACE and getting to know CCACE staff and members was great. I particularly enjoyed being involved in this year's Brain Maze - a busy but fun event!

Beverly Roberts: Scientific Administrator
Being unexpectedly presented to Princess Anne at the opening of the Dementia Prevention Centre and explaining the work of CCACE to her was very memorable.

Success for our Cognitive Epidemiology PhDs!
Academic success has come quickly and early for our three CCACE cognitive epidemiology PhD students, Christina Wraw, Judy Okely and Saskia Hagenaars. They already have two published papers each since they began their studies with us in September 2014.

Christina has two papers, one published in *Intelligence* (Pubmed 26766880) on IQ in youth and physical health at age 50, and one in press with *Intelligence* on IQ in youth and mental health at age 50. She is working on her third paper.

Judy has two papers published. One in *Psychosomatic Medicine* on wellbeing and risk of incident chronic disease (Pubmed 26569542) and one in *Annals of Behavioral Medicine* on wellbeing and risk of incident arthritis (Pubmed 26769022). She has a further two papers under consideration by journals.

Saskia has two papers published as first author. One is in *Molecular Psychiatry*, on the genetic links between cognitive functions and health (Pubmed 26809841). The other is in *International Journal of Epidemiology*, on the association between the polygenic risk score for coronary artery disease and cognitive functions (Pubmed 26822939). We’ve rather lost count of how many other papers Saskia has on the go!

Well done to all three of them for their great work in this area.

Christina Wraw (left), Judy Okely (centre), and Saskia Hagenaars (right) proudly show their published papers.
A Meeting of Minds - Mr Scott Meets his Brain

From 8 July 2016, the National Museum of Scotland have unveiled a new exhibit, John Scott’s brain.

Lothian Birth Cohort 1936 (LBC1936) participant, Mr John Scott saw his brain for the first time in January this year at the National Museum of Scotland’s Collections Care Centre. STV and the LBC team were there to witness Mr Scott seeing a 3D print of his living brain, taken from MRI data captured as part of the LBC1936 study. The 3D print will go on display in the museum from 8 July 2016, along with a stunning representation of Mr Scott’s white matter (tractography) etched in crystal glass. When asked how he felt about having his brain on display in the National Museum, Mr Scott said "It's great! I told my grandchildren: when I'm not here, you can go and see my brain!"

Dr Simon Cox, MRC Imaging Fellow on the LBC1936 study, said "I am used to looking at brain images on the computer day-to-day, but seeing a real model of the brain’s white matter connections in glass and the outer surface of the brain like this is a unique experience – they are incredibly striking objects".

The brain imaging in LBC1936 is overseen by CCACE Group Leaders Professor Joanna Wardlaw and Dr Mark Bastin of Edinburgh Imaging and supported by funding from Age UK and the Medical Reasearch Council. The 3D models of the brain surface and white matter were developed by Dr Mark Bastin and Dave Liewald in collaboration with Sophie Goggins, Assistant Curator of Biomedicine at the National Museum of Scotland and the Edinburgh College of Art.

You can learn more about the exhibit and Mr Scott in an NMS blog by Sophie Goggins at: blog.nms.ac.uk/2016/01/08/the-lothian-birth-cohort-medical-imaging-in-our-new-galleries/
A major new BBC TV series on ageing has featured the Lothian Birth Cohort 1936 study.

In 1947, Ms Jean McKirdy sat an intelligence test, at the age of 11, and around 60 years later she joined the Lothian Birth Cohort 1936 (LBC1936), a major study of the ageing brain. Ms McKirdy and 40 of her fellow LBC1936 participants were recently invited to take part in the BBC series How to Stay Young, co-presented by Dr Chris van Tulleken.

Presenter Dr Chris van Tulleken (right with LBC1936 Director, Professor Ian Deary, and LBC participants) said “...being a science journalist I get to go and film amazing things all around the world. But there is literally nothing I have filmed that is quite as spectacular as this... So taking that test result from 70 years ago and then doing MRI scans, cognitive testing, GWAS, whole genome sequencing, epigenetics... I don’t know that many other people who could drag that many different disciplines into one project and use it to generate so much information. I think it’s totally remarkable.”

Professor Ian Deary said, "It was great to see the enthusiasm of the LBC1936 participants in helping with this... To be featured in such a high-profile programme is solid recognition of how important the LBC1936 participants' results are in the field of ageing research."

You can hear more from Dr van Tulleken in a video interview at https://youtu.be/jIIiU9Clhfdg

The study featured in episode two of the series ‘How to Stay Young’ and you can view the series on the BBC iPlayer at www.bbc.co.uk/programmes/b077nr6k

Ian Deary at Edinburgh Speakers Festival 2016

CCACE Director, Professor Ian Deary, has been invited to be part of this year’s prestigious lineup at the new Edinburgh Speakers Festival 2016 to be held from 9th-11th September. Speakers cover a large variety of topics including cognitive ageing, devolution, politics, history, literature, fashion, Islam, capitalism, cycling, RBS, the Lockerbie bombing, whisky and women’s equality, but all with a focus on Scotland. Ian’s talk is entitled "Understanding Healthy Cognitive Ageing: Scotland’s Unique Contribution". It takes place on Saturday 10th September from 10.00-11.15am. All talks in the series are being held in the Augustine United Church, 41 George IV Bridge, Edinburgh.

To book tickets visit www.edinburghspeakersfestival.com
CCACE ‘Boffins’ Featured in the Daily Record

Genetic data from the Lothian Birth Cohorts has seen a huge amount of use in scientific research. However, until now the genetic measurements taken only covered a limited portion of each participant’s DNA. Now, with funding from the Scottish Genomes Partnership, a collaboration between the Universities of Edinburgh and Glasgow, we plan to sequence the full genome of every cohort member. This means measuring three billion different points on the DNA (for comparison, the previous research was carried out on only 450,000 points), taking advantage of the technological advances that make such sequencing vastly cheaper than it was only a few years ago.

With full genome sequencing data, the geneticists working on the study can look in much more detail at the DNA differences between the participants and test whether these can be used to predict changes in brain health. The cohorts can also contribute data to many more international projects combining data to uncover the genetic basis of health, ageing, and disease. This new development in the study was covered in the media, including the Daily Record, in June this year.

Read the article at: http://tinyurl.com/LBCrecord.

Media Reporting of Science

Reporting of science in the media is largely accurate and the public’s reaction to the findings (for or against) seems to be influenced by their personal (anecdotal) experience. These were the findings of a recent study by CCACE member Dr Martin Pickersgill and Tineke Broer based on one paper on bilingualism.

This study was based on the reporting of a scientific paper on the influence of bilingualism on cognitive ageing by CCACE member Dr Thomas Bak. The study looked for key themes in 37 news items and 228 readers’ comments. Analysis of reader comments showed them to be an important resource for considering issues of importance to researchers studying neuroethics, as well as to scientists themselves. The findings demonstrated that readers’ personal experiences were vital in shaping their reactions to the scientific article, in particular whether their own personal experience seemed to confirm or refute the findings of the scientific study.

The results of this sociological study demonstrate the importance of dialogue between journalists, laboratory scientists and social scientists to support the accurate communication of the intended message.


Godfrey Thomson Featured in a New Exhibition

A treasure trove of artefacts relating to this pioneering educational psychologist are currently displayed at the University of Edinburgh. The exhibition opened on Friday 29th July and continues to the 29th October. Entrance to the exhibition is free, and it is open to the public.

Since the late 1990's, Sir Godfrey's findings have formed the basis of much of the cutting-edge research at the University of Edinburgh into cognitive and brain ageing, led by Professor Ian Deary. Ian’s team studies the now-older people who took part in the Scottish Mental Surveys.

Ian has spent the past decade investigating Sir Godfrey's life, and in 2008 he rescued a mass of never-before-seen documents and objects from Thomson's family home in Edinburgh, just before it was demolished. A selection of those artefacts, portraits and documents feature in the exhibition, telling the story of who Sir Godfrey was and what his motivations were.

Ian Deary said: "Godfrey Thomson saw mental ability tests as an imperfect but useful means to give poor children a chance in life. He was determined to look past pupils' social status, and try to see their underlying ability. By all accounts he was modest, not motivated by money, and happy to share academic wins, which in part led him to fade from the history books. I'm delighted we are now able better to understand and evaluate the pioneering work of this multi-talented and elusive man."

Funding Secured for New Intervention Research

A new intervention study will commence at the Ageing Lab, Heriot-Watt University, funded by the Velux Stiftung. The Intervention Factory is a three year research study which will test a range of activities within existing community-based programmes as potential interventions to reduce cognitive ageing in old age. The project will be directed by CCACE member, Dr Alan Gow and will benefit from input from a local Intervention Factory Forum (including colleagues from Age Scotland, NHS Lothian and Edinburgh Council) and an international Advisory Panel (Professor Kaarin Anstey, Australian National University; Professor Ian Deary, University of Edinburgh; Professor Mike Martin, University of Zurich; Professor Kaisu Pitkälä, University of Helsinki; and representatives from Age UK).

You can follow progress as the study gets underway at www.healthyageing.hw.ac.uk.
CCACE Meets HRH The Princess Royal

On the 6th July 2016 our University of Edinburgh Chancellor, HRH The Princess Royal, opened the new Centre for Dementia Prevention Building in the Bioquarter at Little France. The Centre for Dementia Prevention is led by Professor Craig Ritchie and aims to help society to understand what causes Dementia and then hopes to devise and implement strategies and lifestyle changes that will prevent Dementia from developing in the first place. CCACE was invited to this event as a complementary Centre working in ageing research at Edinburgh. Beverly Roberts represented CCACE in her role as Centre Scientific Administrator. The Princess Royal showed great interest in the work of our members and asked why studying normal ageing was so important in the context of dementia.

Brain Maze Amazes

In partnership with the Centre for Regenerative Medicine (CRM), CCACE hosted its second popular Brain Maze Event on the 24th June 2016. The interactive open day event was part of the Medical Research Council's Festival of Medical Research.

The sellout event led people through the maze of corridors and rooms in the basement of the Department of Psychology, where CCACE is based. In each of the 11 rooms, they had 10 minutes to experience a different aspect of the ageing brain and body. Popular activities included a supermarket sweep game, shopping for the lifestyle factors which affect how our brain ages (like smoking) while busting a few myths (like the lack of effect of brain training). The Maze finished with a cafe where participants got the chance to speak with scientists and reflect on their experience of the Maze.

One of the main comments was that, having spent 2 hours in the maze chatting to scientists, people would have liked more time in each room. A great endorsement of the time and effort invested by CCACE and CRM staff and students who took the time out from their research to develop activities and help run the Brain Maze.

A huge thank you to everyone involved!
Congratulations

Age UK Receives Benefactor Award

At the Medical School graduation on Saturday 2nd July 2016, Tom Wright CBE received the University of Edinburgh Benefactor Award on behalf of Age UK. The Benefactor Award is the highest honour, equivalent to an Honorary Degree, bestowed upon organisations that have given outstanding support to the University.

Tom Wright has been Chief Executive of Age UK since its launch in 2009. It is the UK’s largest organisation for older people and its network includes the Age UK Group, Age Scotland, Age Cymru, and Age NI, 160 local Age UKs across England and Age International, which works in over 40 developing countries. The charity helps millions of older people each year. Its information and advice service across a huge range of topics has reached 5.7 million people. Advice on money alone identified £183 million in unclaimed benefits for older people. Research is important among Age UK’s charitable activities. It recognises that losing our thinking skills is one of people’s greatest fears about ageing. That explains why Age UK chose The Disconnected Mind at the University of Edinburgh as its flagship research project. From the project’s outset in 2004, Age UK have awarded it, after scientific peer-review, over £7 million.

The laureation for the Award was given by Professor Ian Deary, Director of The Disconnected Mind project. Ian highlighted that the project's useful findings have been reported in over 200 peer-reviewed journal articles, including the world's leading journal Nature, and recently on BBC1's How to Age Well. Ian also stressed how the Age UK funding has been a foundation from which millions of pounds in additional research funding had been attracted, from which an MRC Centre had grown, and from which many young scientists' careers had flourished.

In reply to Ian's laureation, Tom Wright said to the graduation audience, "We are immensely proud of the pioneering Disconnected Mind project. When it began in 2004, we could not have predicted how far its significance and reach would burgeon. Under Professor Deary's leadership, the research is consistently of the highest quality. The findings are of profound significance, from the genetics of cognitive ageing to the lifestyle factors that help protect our thinking skills as we grow older. As well as publication in the highest impact journals, the project captures attention and imagination from the media and arts. It regularly hits headlines around the globe. Augmenting this enviable impact record, Age UK and the project team work together to transfer the findings to policy-makers and practitioners from health services to financial services. We hope and expect that our partnership will ultimately translate to better cognitive health and quality of life for older individuals and populations."
Congratulations to Saskia Hagenaars, one of our own CCACE PhD students, who has been awarded the 2016 Sir William Darling Memorial Prize. The prize is awarded by the Principal to “such student who has done in any year most to advance or enhance the reputation [through conduct, example, scholarship or pre-eminence in sport] of the University.”

Saskia began her PhD with CCACE in September 2014 and is now an integral member of the CCACE genetics team. She is doing groundbreaking work in the molecular genetics of cognitive functions and personality traits and their relationships with psychiatric and physical illness.

Although she is only half way through her PhD she already has two papers in the journal *Molecular Psychiatry* (highest impact journal in psychiatry) and one in the *International Journal of Epidemiology*. These achievements would be impressive for a full time research staff member. However, they are made all the more impressive by the fact that she is a PhD student and still only half way through her second year.

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Alan Gow Receives Public Engagement Award

CCACE member Dr Alan Gow was recently awarded the Heriot-Watt Principal’s Public Engagement Senior Prize. The award was in recognition of a portfolio of work which included support from CCACE and particularly Robin Morton for last year’s Fringe performance as part of Edinburgh Beltane’s Cabaret of Dangerous Ideas, “The Great British Brain Off”. That 2015 show has since gone a few more places, including the Talk Science @ Irvine Bay programme hosted by the Royal Society of Edinburgh. The show explores the factors that might protect or harm the ageing brain, including some key Lothian Birth Cohort findings, and the audience are encouraged to share their ideas about the key lifestyle ingredients which forms the basis for discussions about how we might best protect our thinking skills as we age. You can watch the full show at: www.youtube.com/watch?v=Z7PTzeU1LpA. The Brain Off tour continues later in the year in the British Science Festival being held in Swansea this September.

The public engagement award also recognised Alan’s work with Research the Headlines and their recent British Academy-funded “Rewrite the Headlines” initiative with schoolchildren and undergraduates. With follow-up funding from the BA, Alan is now developing activities to help older adults gain confidence in critically evaluating the research they see in the media discussing the latest factor that might help or harm the ageing brain.

On the public engagement front, some LBC results related to physical activity and brain health also featured in Sian Williams new book. It was based on an interview that Sian recorded for her BBC Radio 4 series towards the end of last year. The programme is still online at: www.bbc.co.uk/programmes/b065ssr8 with a shorter standalone piece at: www.bbc.co.uk/programmes/p02zz7ql.
Chloe’s Success at DPUK Conference

Congratulations to Chloe Fawns-Ritchie on winning the early career researcher prize at the Dementia Platform UK (DPUK) Conference in London on 26 April 2016.

The Dementia Platform brings together the world’s experts with cutting edge technology to speed up progress in dementia research and has a significant contribution from Edinburgh.

Chloe is the CCACE Human Testing Development Officer and is closely involved in developing cognitive test batteries for several studies.

Hello and Goodbye

Matthew Iveson and Helen Corby Join CCACE while Robin Morton says Goodbye

Matthew Iveson joined us in August 2016 as a Research Fellow working jointly for CCACE (with Ian Deary) and the Administrative Data Research Centre–Scotland (ADRC-S, with Chris Dibben). It is a two year project funded by the Economic and Social Research Council (ESRC) to link the Scottish Mental Surveys of 1932 and 1947 to demographic, social and health data. He will be joined by PhD student, Helen Corby, in September who will also be working on this project. The title of her PhD project is “the relationship between diagnoses and social care provision in national cohort: implications for social and health care integration”.

After 7 years Robin Morton said goodbye to CCACE in August. He is leaving for a new position as Scientific Communications Manager at the Centre for Regenerative Medicine, University of Edinburgh. We will all miss him and wish him well in his new role.

Dates for your Diary

CCACE Autumn Seminar Series
St Andrews Day Seminar: Professor Rudi GJ Westendorp. 29th November, 5.00–6.30pm. Room F.21, 7 George Square. All are welcome to attend. No pre-booking required.

CCACE Introductory Short Courses
R Programming: 3 days, 5th –7th December
Cognitive Genetics: 1 day, 8th December
Systematic Reviews and Meta-Analysis: 3 days, 12th December
Cognitive Testing: 1 day, 13th December
Booking for all of these courses will open in October 2016. Check the CCACE website for full details.
Centre for Cognitive Ageing and Cognitive Epidemiology
Department of Psychology
University of Edinburgh
7 George Square,
EDINBURGH
EH8 9JZ
+44 (0)131 650 8275
ccace@ed.ac.uk

Core Staff Contact Details

Support Staff
Scientific Administrator: beverly.roberts@ed.ac.uk
Administrative Secretary: denise.munro@ed.ac.uk
Knowledge Exchange Officer: ccace@ed.ac.uk
Systems Analyst: dave.liewald@ed.ac.uk

Scientific staff
Statistician: michael.allerhand@ed.ac.uk
Geneticist: sarah.harris@igmm.ed.ac.uk
Genetic Statistician: gail.davies@ed.ac.uk

Technical staff
Human Testing Technician: cfawnsr@staffmail.ed.ac.uk
Brain Imaging Research Fellow: Devasuda.anblagan@ed.ac.uk
In Vivo Imaging Research Fellow: sophronia.lewis@ed.ac.uk

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