Life-style Changes Partially Protect, but New Medicines are Vital for Reducing Dementia Case Numbers

- Since the end of the 1980s UK age-standardised dementia rates have fallen by 20 per cent because of life-style improvements. If this progress can be maintained, primary prevention will generate UK welfare benefits worth £5 billion a year more by the 2030s. But with ageing only effective new pharmaceutical treatments will be able to reduce the overall disease burden caused by dementias.

- The UK is today playing a leading role in developing new ways of preventing and treating Alzheimer’s Disease and other Dementias. University and industry based researchers are testing novel therapies for countering Amyloid beta and Tau protein concentrations in the brain, and preventing the harmful build-up of Amyloid beta. Opportunities involve targeting key enzymes and promoting better protein/peptide clearance via vascular system linked mechanisms. There is also growing understanding of the role of ‘prion-like’ disease spreading particles in neurodegeneration.

- To deliver David Cameron’s ambition of making Britain a global centre for research into neurodegeneration and ‘the best country in the world for dementia care and support’ there must also be advances in the equitable funding and effective delivery of health and social care for people with dementia. This is needed to stop the unfair financial penalisation of individuals and families affected by neurodegenerative disorders and to raise care standards to a world-class level.

‘In the coming year we will know if we are already at the start a new era of better treatments for slowing or stopping the development of Alzheimer’s Disease and allied neurodegenerative disorders, or if current research strategies will have to be refocused’ said UCL’s Professor John Hardy today, speaking in advance of his 2016 UCL School of Pharmacy New Year Lecture Pathways to Neurodegeneration*. He continued ‘I am confident that over the next decade or so we will find more effective ways of preventing or slowing the dementias. By 2050 such advances should be benefiting at least a million people a year in the UK, and tens of millions world-wide.’

Professor David Taylor of the UCL School of Pharmacy commented ‘thanks to informed political leadership and the work of organisations like Alzheimer’s Research UK, The Alzheimer’s Society and Public Health England, the outlook for families and individuals at risk of conditions like Alzheimer’s Disease is getting brighter. However, much more still needs to be done, not only with regard to developing new medicines and viable markets for them to be supplied in, but also in the areas of primary prevention and providing equitably funded care for everyone with dementia.’

Work conducted in settings like UCL has shown that dementia can develop over decades and is the result of pathological processes, not ‘normal ageing’. People with Alzheimer’s Disease and other dementias deserve good health care no less than those with cancers or other recognised illnesses. Yet in England most of the overall cost of dementia is incurred privately by patients and families, in part because services classified as ‘social care’ are charged for until individuals’ funds are exhausted.

It is also now becoming better understood why stopping smoking, reducing blood pressure, avoiding obesity and exercising regularly do not only protect against type 2 diabetes, heart disease, strokes
and cancers, but can also lower dementia risks. There is evidence that in the UK age specific dementia rates have fallen by over 20 per cent since the end of the 1980s. This is probably because of improving living conditions, better health care and increased levels of mental activity in later life.

The extent to which healthier life styles can protect against Alzheimer’s Disease needs further investigation. But Alzheimer’s Disease UK Research Director Simon Ridley today noted ‘If primary prevention improvements can be maintained at the same rate as that achieved in the past twenty years, they alone may generate savings of £5 billion or more a year by the 2030s. Many people want to know more about how they can protect themselves and their families from Alzheimer’s Disease and other forms of dementia and the distress and lost wellbeing they can cause’.

In discussing Professor Hardy’s lecture and the work of other researchers, Dr Ridley said ‘Alzheimer’s Research UK is proud to be funding new Drug Discovery Institutes in Cambridge, Oxford and UCL. I believe that, working with the research based pharmaceutical industry, we are well placed to meet the London Dementia Summit’s goal of identifying one or more disease-modifying treatments by 2025. Even if present efforts aimed at curbing the harmful effects of Amyloid beta in the brain do not prove as effective as is hoped, there is a range of other important opportunities for developing new therapies. Dementia research is closing the gap with cancer research – success in both is vital if we are to face the future challenges of individual and population ageing as well as possible’.

Dame Gill Morgan, the current Chair of NHS Providers and a previous Chair of The Alzheimer’s Society, added ‘providing better health and social care for those who develop symptomatic dementia is also vital. The UK’s health and wider welfare system works well compared with many others. But judged against the most successful European nations we spend significantly less on health and social care, and need to modernise our approach to supporting individuals and families affected by dementia. The current situation is neither just nor optimally efficient.’

‘Progress demands ending health and social care financing distortions, and improving the professional care for people with dementia provided by NHS doctors, nurses and pharmacists, as well as that given by other staff. As a former GP and public health doctor I welcome the prospect of more effective medicines, and of using the diagnostic and treatment opportunities we already have to better effect. But to keep the original NHS promise we also need to prevent dementia whenever possible, and institute genuinely world-class systems for providing well-coordinated, equitably funded, care for everyone who has Alzheimer’s Disease or similar life threatening illnesses’.

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**Note:** Professor John Hardy is a geneticist and molecular biologist. He recently won the $3 million Breakthrough Prize in Life Sciences for his research into the causes of Alzheimer’s Disease, Parkinson’s Disease and frontotemporal dementia. Previously, he has received other important awards for research achievements such as the discovery of a key mutation in the amyloid protein precursor (APP) gene in 1991. On January 12th 2016 Professor Hardy will give the UCL School of Pharmacy New Year lecture at the Royal Society, entitled Pathways to Neurodegeneration. Dame Gill Morgan and Dr Simon Ridley are acting as discussants at this occasion.

**For further information or for an invitation to John Hardy’s evening lecture or the press conference to be held at the Royal Society on the morning of January 12th 2016, please contact David Taylor on 07970 139892 or David.G.Taylor@ucl.ac.uk or Jennifer Gill at Jennifer.Gill@ucl.ac.uk**

Press conference attendees will hear presentations from Professor Hardy, Dame Gill Morgan and Dr Simon Ridley that will provide additional information about new approaches to dementia prevention and treatment and be able to meet with other experts present. Attendees will also be able to access a comprehensive UCL School of Pharmacy Briefing on The Prevention and Treatment of Alzheimer’s Disease and other Dementias

The 2016 UCL School of Pharmacy New Year lecture is sponsored by Pfizer Ltd and the Royal Pharmaceutical Society

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