Date: 04/04/11  
Word count: 731

Sentences: 38

Research leads revolution in the treatment of Alzheimer's Disease

Scientists have uncovered five new genes in the search for the genetic make-up of late-onset Alzheimer’s disease (AD).

Their work into this devastating condition is already changing the way people are thinking about treating and diagnosing the disease.  
  
The results of this latest study, in which The University of Nottingham played a key role, are published today April 3 2011 in the journal Nature Genetics.  
  
The research, funded by the Wellcome Trust, has pinpointed the variants in another five genes that are responsible for increasing the risk of contracting AD in old age.

This team of scientists from across the globe have now identified a total of nine genes as some of the prime causes of AD - one of the most common forms of dementia.

Kevin Morgan, Professor of Human Genomics and Molecular Genetics, in the Institute of Genetics, leads the Alzheimer’s disease research group at The University of Nottingham.

He said: “Groups worldwide have spent the last 20 years searching for these genes.

The consortium has played a major part in finding all of the genes before anybody else.

Our aim is to improve the lives of AD patients and their families, who live with the fear that they will also develop the disease.

Until now the genetics of late-onset AD have been poorly understood.

We are now on the way to identifying all the genetic factors that contribute to late-onset AD.

This research is already spurring on additional research towards treatments based on specific genetic issues which contribute to the disease.”  
  
The UK-led research involved scientists from universities in Cardiff, London, Cambridge, Nottingham, Southampton, Manchester, Oxford, Bristol and Belfast.

They collaborated with Irish, German, Belgian, Greek and American institutions.  
  
In September 2009 this consortium of scientists published the results from the largest ever Alzheimer’s genome-wide association study (GWAS) which led to the discovery of two new genes associated with the disease.  
  
The results were described by the Alzheimer’s Research Trust as a leap forward for dementia research.

The research paper was described by Time Magazine as one of the top ten breakthroughs in medical research for 2009.

The paper has been cited 168 times to date.  
  
Over the last decade, in collaboration with seven Alzheimer’s Research Trust (ART) Network Centres, The University of Nottingham has established one of the largest collections of DNA samples from Alzheimer’s disease and control patients worldwide.

Over 4000 samples are stored at seven UK centres under the supervision of Professor Morgan. This resource has been used successfully in a number of studies into the genetic make-up of AD.  
  
Environmental and genetic factors contribute to the risk of contracting AD.

Scientists have spent the last 20 years searching for the genetic causes.

Until recently only one gene had been known to increase disease risk for the common form of Alzheimer’s disease with late onset.  
  
Professor Morgan, who is based in the School of Molecular Medical Sciences, says this subsequent paper will be of similar importance.

He said: “We receive constant enquiries about the genetic influence of late-onset AD.

These questions must be scientifically answered to clarify confusion and help in the treatment of this dreadful disease.

The value of the ART resource will increase as more results and samples become available.

It will allow us to close in on even smaller genetic effects and identify the actual genetic differences that are important for AD risk.”  
  
Dr John Williams, The Wellcome Trust's Head of Neuroscience and Mental Health added: "As our population ages, we will see more and more people affected by Alzheimer's disease.

It is distressing both to patients and their families and places a heavy economic burden on our society.

Understanding the complex processes that underpin the disease will be essential to earlier diagnosis and to developing improved treatments.  
  
"This interesting new study takes a step further along this path."  
  
Rebecca Wood, Chief Executive of Alzheimer’s Research UK said: “UK scientists are leading the field in our understanding of the genetics of Alzheimer’s.

These findings are a step towards defeating dementia.

We are yet to find ways of halting this devastating condition, but this work is likely to spark off new ideas, collaborations and more research.  
   
“UK scientists are making fantastic progress towards defeating dementia and we need to support them all the way.

With enough investment in research we can offer hope to the 35 million people worldwide who live with dementia.”  
  
  
**— Ends —**  
  
  
**Notes to editors**: The University of Nottingham, described by The Sunday Times University Guide 2011 as ‘the embodiment of the modern international university’, has award-winning campuses in the United Kingdom, China and Malaysia. It is ranked in the UK's Top 10 and the World's Top 75 universities by the Shanghai Jiao Tong (SJTU) and the QS World University Rankings. It was named ‘Europe’s greenest university’ in the UI GreenMetric World University Ranking, a league table of the world’s most environmentally-friendly higher education institutions, which ranked Nottingham second in the world overall.  
  
The University is committed to providing a truly international education for its 40,000 students, producing world-leading research and benefiting the communities around its campuses in the UK and Asia.  
  
More than 90 per cent of research at The University of Nottingham is of international quality, according to the most recent Research Assessment Exercise, with almost 60 per cent of all research defined as ‘world-leading’ or ‘internationally excellent’. Research Fortnight analysis of RAE 2008 ranked the University 7th in the UK by research power. The University’s vision is to be recognised around the world for its signature contributions, especially in global food security, energy & sustainability, and health.  
More news from the University at: www.nottingham.ac.uk/news

**Story credits**

**More information** is available from **Professor Kevin Morgan**, kevin.morgan@nottingham.ac.uk

Lindsay Brooke

Lindsay Brooke - Media Relations Manager

**Email:** [lindsay.brooke@nottingham.ac.uk](mailto:lindsay.brooke@nottingham.ac.uk?Subject=Enquiry) **Phone:** +44 (0)115 951 5751 **Location:** King's Meadow Campus