**Study finds new method for early detection of Alzheimer’s disease**

*02 Aug 2011*

**Scientists at The University of Manchester have discovered that measurements of brain activity could be used to predict Alzheimer’s disease in people with mild memory problems.**

It’s hoped the study, which was part-funded by Alzheimer’s Research UK, will help improve clinical trials to find new treatments for the disease.

A team led by Karl Herholz, Professor of Clinical Neuroscience at the Wolfson Molecular Imaging Centre, studied 44 healthy people, 40 people with Alzheimer’s and 94 people with mild cognitive impairment (MCI) from the Alzheimer’s Disease Neuroimaging Initiative (ADNI).

People with MCI experience problems with their thinking and memory, but not to an extent that interferes with daily life.

Many people with MCI, but not all, go on to develop Alzheimer’s, and being able to predict who will develop the disease is a key target for researchers.

The team analysed the results of cognitive tests and PET scans – sophisticated brain scans that measure glucose metabolism, a marker of brain activity.

They found that in people with MCI, PET scans taken at the start of the study showed greater impairment in those who went on to develop Alzheimer’s than in those who didn’t.

They also found the scans were better for predicting who would develop Alzheimer’s than cognitive tests, and could detect changes in brain function over a shorter time period.

It’s hoped their findings, which are published in the Journal of Nuclear Medicine today (August 2), could improve clinical trials by allowing researchers to test new treatments earlier, when they are likely to be most effective.

Professor Herholz said: “Our findings show measuring brain activity could be a better way of detecting Alzheimer’s in its earliest stages, and we hope this method could boost the search for new treatments to delay or prevent the disease.

PET scans are increasingly being used in clinical trials of new drugs, and we expect this will eventually lead to shorter trials and faster progress.

“Dementia can only be defeated through research, and I hope our study will bring us closer to reaching that goal.”

Dr Simon Ridley, Head of Research at Alzheimer’s Research UK, added: “These exciting findings could give us a reliable way to predict Alzheimer’s disease, which is crucial for allowing potential new drugs to be tested in the earliest stages of the disease.

Research is making progress towards a treatment that could stop Alzheimer’s in its tracks, but it’s likely that any new treatments would need to be given early to have a beneficial effect.

“We must now follow up this research to see whether PET scans could improve clinical trials and speed up progress.

With 820,000 people affected by dementia in the UK today, and more than 4,000 people in Manchester alone, the need for research has never been more urgent.”

The study received funding from Alzheimer’s Research UK and the Alzheimer’s Disease Neuroimaging Initiative.