

Press release

'Possible key to Alzheimer medication'

Leiden October 25, 2010 – Dutch researchers have discovered a possible key which might result in a medicine for Alzheimer's disease. "We have found brain cells which become extra active at a time when there are still no visible symptoms of the disease. Nevertheless, people are already ill", says brain researcher Dick Swaab. "It would be fantastic if we could simulate this activation process through medicines once the disease has progressed." The findings of the Dutch scientists, under the auspices of research institute TI Pharma, are due to be published in the reputable scientific magazine Brain.

Scientists examined the brain tissue of 49 deceased patients, in various stages of the disease. In the very earliest stage of the disease, patients did not appear to have any memory impairments or other symptoms of Alzheimer's disease. Under the microscope, however, signs of Alzheimer's are visible. Swaab: "The brain itself appears to compensate for the disease process; nearly 500 genes in the front part of the parahippocampal cortex then become extra active. These genes ensure that nerve cells are better able to communicate with each other, allowing people to continue to function well. As soon as these genes become less active, the memory impairments become apparent."

According to Swaab, this discovery is an important step on the road to finding effective medication. "We see these temporarily active genes as a pointer to a medicine. Once the disease has progressed to a more advanced stage, we can see whether we can reactivate the brain cells using medicines." Swaab adds that a medicine for Alzheimer's will only be a possibility for future generations.

Alzheimer's is the most common cause of dementia. Between sixty and seventy percent of patients suffer from this form of dementia. In Alzheimer's disease, the nerve cells in the brain and the connections between these cells break down, preventing the brain from functioning well. There are an estimated quarter of a million patients in the Netherlands; this number will double in the next forty years.

The research to which among others neuroscientists Dick Swaab, Joost Verhaagen and Koen Bossers from the Netherlands Institute for Neurosciences contribute is funded by Top Instituut Pharma. Other partners are the Netherlands Brain Bank, DNage and health care organization Abbott.

About Top Institute Pharma

Top Institute Pharma (TI Pharma) is a public-private partnership in which scientific and business worlds work together on groundbreaking, multidisciplinary research aimed at improving the development of socially valuable medicines. Our research portfolio is based on the disease areas as specified in *Priority Medicines*, a report by the World Health Organization (WHO). These projects create knowledge that is important for better, faster and less-expensive development of valuable new medicines. For more information, please visit www.tipharma.com.