Alzheimer's vaccine cures memory of mice

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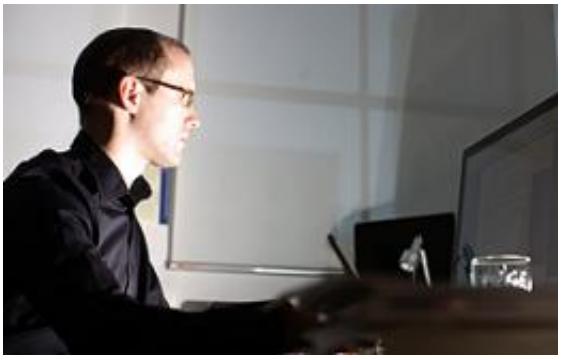

Associate Professor Lars Ittner: "Although we have a long way to go before the vaccine might be available for human use, these early results are very promising."

(Medical Xpress) -- A vaccine that slows the progression of Alzheimer's disease and other types of dementia has been developed by researchers at the University of Sydney's Brain and Mind Research Institute (BMRI).

The vaccine, which targets a protein known as tau, prevents the ongoing formation of neurofibrillary tangles in the brain of a mouse with Alzheimer's disease.

This progressive neurodegenerative disease affects more than 35 million people worldwide. The tau protein is also involved in front temporal dementia, the second most common form of dementia in people younger than 65 years.

The results of the study which led to the production of the vaccine have been published today in the scientific journal PLoS ONE.

Lead author on the study, Associate Professor Lars Ittner, from the Alzheimer's and Parkinson's Disease Laboratory says: "Our study is the first to show that a vaccine targeting the tau protein can be effective once the disease has already set in.

"The vaccine appears to have a preventative effect: slowing the development of further tangles, rather than clearing existing ones, but the exact mechanism involved is not yet understood," he said.

According to Associate Professor Ittner, scientists have been working on vaccines targeting the amyloid plaques seen in Alzheimer's for many years with a few currently in clinical trials.

"Most of the other vaccines targeting tau were tested only before or around the onset of the disease in animal models, but the vast majority of people with Alzheimer's disease are only diagnosed after the symptoms have appeared.

"We are already collaborating with the US pharmaceutical industry to develop this new vaccine for humans.

"Although we have a long way to go before the vaccine might be available for human use, these early results are very promising and a great reward for the countless hours spent in the lab by me and my team!"

Provided by University of Sydney

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