

'Foreign' proteins are also implicated in Alzheimer's disease, implications for differentiated treatments

September 24 2012



Neurodegenerative diseases such as Alzheimer's or Parkinson's are characterised by the loss of nerve cells and the deposition of proteins in the brain tissue. A group of researchers led by Gabor G. Kovacs from the Clinical Institute of Neurology at the MedUni Vienna has now demonstrated that Alzheimer's disease does not just – as previously believed – involve the proteins that are attributed to Alzheimer's, but instead the condition can involve a mixture of interacting proteins from different neurodegenerative diseases.

"As a result, Alzheimer's should not be treated in isolation. According to these latest findings, pure, classical Alzheimer's disease, which involves

only the attributed proteins tau and [amyloid beta](#), appears not to be the norm," says Kovacs. There is also a varied regional distribution of nerve cell loss and protein deposits between patients which, taken together, have clinical prognostic significance. As a consequence of this, differentiated strategies need to be developed for personalised therapy that takes account of all the interacting factors.

The new treatment concepts which are currently being developed by the MedUni Vienna's neuropathologists, neurobiologists, neurologists, psychiatrists and neuroimaging experts will divide the patients into "sub-groups". Says Kovacs: "The aim is to define these groups very precisely in future in order to be able to offer them personalised treatment."

Dementia diseases: a growing trend

Around 100,000 Austrians are currently suffering from a dementia-related illness, according to statistics from the Austrian Alzheimer Society. According to estimates, this figure will rise to around 280,000 by 2050 as a result of the increasing age of the general population. Alzheimer's disease is responsible for 60 to 80 per cent of these conditions.

The global Alzheimer's report by "Alzheimer's Disease International" reckons that the prevalence of dementia doubles every 20 years. There are currently around 35 million people worldwide suffering a dementia-related illness. By 2030, their number will rise to 65.7 million and reach as many as 115.4 million by 2050.

Provided by Medical University of Vienna

Citation: 'Foreign' proteins are also implicated in Alzheimer's disease, implications for differentiated treatments (2012, September 24) retrieved 13 March 2024 from

<https://medicalxpress.com/news/2012-09-foreign-proteins-implicated-alzheimer-disease.html>

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