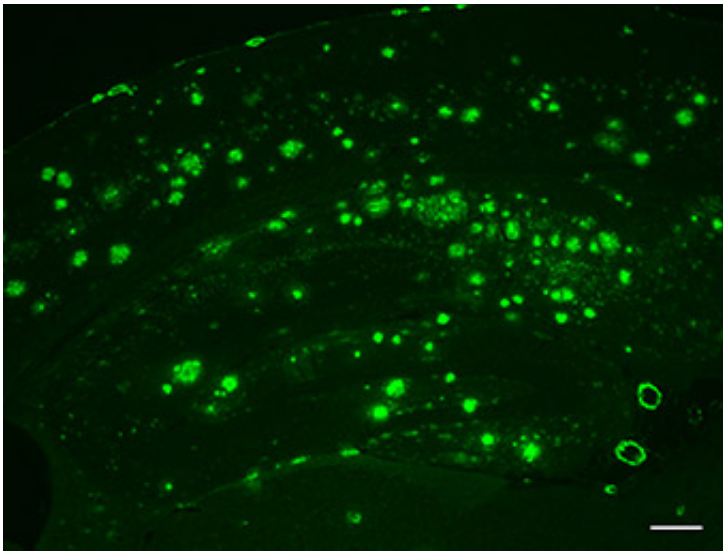


# Innovative method to treat Alzheimer's in mice

April 1 2013

---

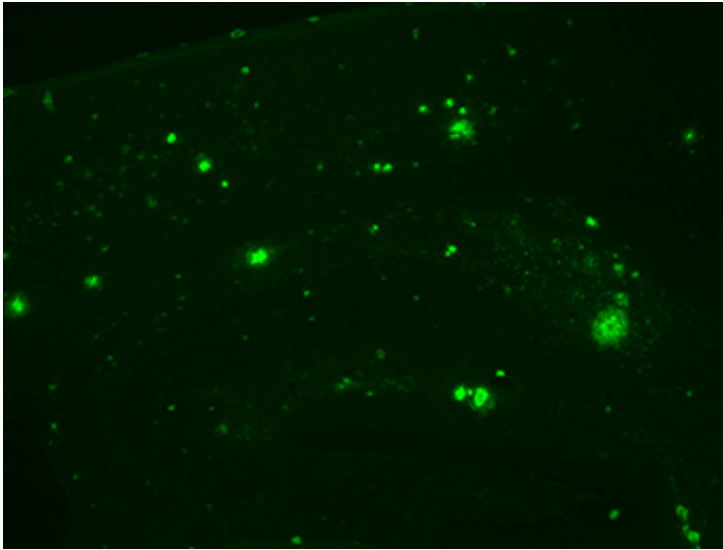


Amyloid-beta peptide in the brain of the mouse model, before gene transfer using AAV.

Researchers from the RIKEN Brain Science Institute report that they successfully used a virus vector to restore the expression of a brain protein and improve cognitive functions, in a mouse model of Alzheimer's disease.

The researchers, led by Dr Takaomi Saido, developed an adeno-associated virus (AAV) vector carrying the neprilysin gene that they administered to neprilysin-deficient mice. Because it is impossible to

deliver genes directly to the brain without surgery, the researchers injected the virus in the [left ventricle](#) of the heart, as this provides a direct route to the brain.



Amyloid-beta peptide in the mouse model after the gene transfer.

They show that neprilysin was expressed in the brain of the mice and that this resulted in a decrease in the accumulation of amyloid-beta peptide, the protein responsible for cognitive decline in Alzheimer's patients. The researchers also observe a reduction of the symptoms associated with Alzheimer's disease in the mice, such as memory loss. These results point towards a new therapeutic strategy for Alzheimer's disease and other neurodegenerative diseases.

**More information:** The results are presented in the journal *Scientific Reports*, [DOI: 10.1038/srep01472](https://doi.org/10.1038/srep01472)

Provided by RIKEN

Citation: Innovative method to treat Alzheimer's in mice (2013, April 1) retrieved 3 May 2024 from <https://medicalxpress.com/news/2013-04-method-alzheimer-mice.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.