

New clues to the cause of Alzheimer's disease

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Researchers at the Sahlgrenska Academy, University of Gothenburg, have identified a series of novel proteins in human cerebrospinal fluid. The proteins, which carry specific sugar molecules, are found in greater concentrations in patients with dementia caused by Alzheimer's disease than in patients with dementia caused by other diseases. This gives hope for new forms of treatment in the future.

Göran Larson is a professor at the Sahlgrenska Academy and one of the authors of the article published in the revered journal *Proceedings of the National Academy of Sciences USA* (PNAS).

"When it comes to the link to Alzheimer's, we're thinking first and foremost of the possibilities to use these molecules as markers for an early and reliable diagnosis, but also, of course, of what role these molecules may play in the development and course of the disease."

These new molecules give researchers another way of thinking of the mechanisms behind [Alzheimer's disease](#). Larson and his research team are already working with other researchers at the Sahlgrenska Academy and Chalmers University of Technology to develop new analytical techniques for measuring the concentrations of these molecules in [cerebrospinal fluid](#). The aim is to try to make the analyses more sensitive, as well as simpler, cheaper and more accessible so that they can be used as routine clinical assays when investigating dementia.

"Dementia is a major and growing problem not just for healthcare but for society as a whole since more people are getting older and older, and

the single largest risk factor for Alzheimer's is just that – old age," says Larson. "There isn't currently any effective pharmaceutical treatment for Alzheimer's, but if this discovery can contribute to an early diagnosis then medicines that slow the progression of the disease can be tried before the [dementia](#) gets too severe.

"If we can link the formation of these [molecules](#) to the disease mechanisms behind Alzheimer's, then there's hope that we can also develop new drugs that can affect the course of this serious disease."

ALZHEIMER'S DISEASE

With more than 100,000 people affected in Sweden, Alzheimer's is one of the most common diseases of our society. Caused by changes in the brain tissue, the disease predominantly affects the memory and often leads to an earlier death. Alzheimer's disease results in not only considerable suffering for patients and their families, but also in huge costs to society.

Provided by University of Gothenburg

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