

Hope sparked by new vaccine for Alzheimer's

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Credit: AI-generated image ([disclaimer](#))

Brain research has made unprecedented progress over the years, with Europe at the forefront of scientific advances. But more can be done. This comes from Alzheimer's Disease International who issued their report on the Global Economic Impact of Dementia. They estimate that if dementia care were a country, it would be the world's 18th largest economy, ranking between Turkey and Indonesia.

The European MIMOVAX project has high hopes of making a significant breakthrough in this important area of medical research. Alzheimer's Disease (AD) is a progressive, degenerative and irreversible brain disorder that causes intellectual impairment and disorientation. With no effective treatment, the MIMOVAX team has set out to develop a vaccination which can ensure safe and effective treatment, and ultimately halt progression of this crippling disease.

MIMOVAX is a 'Specific Targeted Research Project' (STREP) which targets truncated peptides A β 40/42 - derived from the [Amyloid Precursor Protein](#) (APP) - through active immunisation. The team focused on the use of [immune reactions](#) to fight known and less well-known [beta amyloid](#) (BA) proteins, which are thought to cause the disease.

The initial three-year project (extended to another 15 months to fulfil clinical objectives) was led by the Austrian company AFFiRiS AG. The consortium comprised three other industrial companies, two university institutes and a clinic, with a total of 20 scientists. The project received funding of EUR 4.3 million, of which EUR 2.4 came from the European Commission.

During the course of MIMOVAX, several AD [vaccine candidates](#) have been identified, which demonstrate the ability to reduce amyloid plaque load and alleviate the pathologic hallmarks of AD in the brain of animal models. In addition, according to the research team, a vaccination using AD vaccine candidates, improved [spatial memory](#) and learning in transgenic animals, thereby showing the potential for altering disease progression in these models. These experiments led to the identification of the AD03 vaccine as a candidate for clinical testing.

Dr Markus Mandler, the scientific coordinator at AFFiRiS AG explains: 'A clinical study using AD03 was conducted on 24 elderly patients with

mild AD. Over the course of 12 months we studied the safety and tolerability of the vaccine. We then followed the patients up for a further 12 months to assess their behaviour. The results from these tests are currently being evaluated and we should see the final analysis in a few months.'

He adds: 'Once we see the full results we will decide whether to embark on further clinical testing, eventually leading to studies and data which can be presented to regulatory authorities for review and approval.'

More information: MIMOVAX www.mimovax.eu

Alzheimer's Disease International www.alz.co.uk/

Provided by CORDIS

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