

## AlzeCure publishes new article on the GSM mechanism behind Alzstatin against Alzheimer's disease

**AlzeCure Pharma AB (publ) (FN STO: ALZCUR) , a pharmaceutical company that develops candidate drugs for CNS diseases, focusing on Alzheimer's disease and pain, announced today that a new scientific review article on the mechanism underlying the Alzstatin platform has now been published and made available online.**

The article, titled *Gamma-secretase modulators: a promising route for the treatment of Alzheimer's disease*, was published in advance online in *Frontiers in Molecular Neuroscience* and is written by Gunnar Nordvall, Head of Chemistry and IP at AlzeCure Pharma. Co-authors are Johan Lundkvist and Johan Sandin.

The article goes through the background and history of small-molecule Alzheimer's therapies focused on the so-called amyloid hypothesis, which has received greatly increased scientific support in recent years. The focus of the review article is on the development of gamma-secretase modulators (GSM), which is the mechanism underlying the Alzstatin platform, and why continued development of these new therapies is important for the field.

Gamma-secretase modulators reduce the production of toxic amyloid-beta protein, A $\beta$ 42, which is the building block of the amyloid plaques found in the brains of Alzheimer's patients. In addition, there is an increased production of shorter A $\beta$  peptides A $\beta$ 37 and A $\beta$ 38, which have been reported to have protective effects and, among other things, to be able to also lower the aggregation of A $\beta$ 42, and thereby also reduce the build-up of amyloid plaques.

"Gamma-secretase modulators that we develop in the Alzstatin platform are small molecule drugs where there is a strong genetic link to the disease. The advantages of these small molecule drugs include that the substance can be taken as a tablet at home, is designed to pass into the brain efficiently and is produced at a much lower cost compared to biological drugs," said Gunnar Nordvall, Head of Chemistry and IP at AlzeCure Pharma. "These substances could be used in combination with antibody treatments, but also after completion of antibody treatment to counteract the rebuilding of amyloid in the brain. In the long run, these substances could also function as a preventive treatment to prevent the development of the disease."

"This publication describes an area that is generating a lot of interest right now, and the fact that this review article becomes available a week before the big Alzheimer's conference CTAD in Boston feels very timely. Alzstatin has a number of unique advantages as a potential treatment for Alzheimer's and we hope that this publication will further clarify this," said Martin Jönsson, CEO of AlzeCure Pharma. "That Roche will now present phase I data with its gamma-secretase modulator on CTAD congress further strengthens the validity of the mechanism."

The article is available online via the following link:

<https://www.frontiersin.org/articles/10.3389/fnmol.2023.1279740/full>

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## About AlzeCure Pharma AB (publ)

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AlzeCure® is a Swedish pharmaceutical company that develops new innovative drug therapies for the treatment of severe diseases and conditions that affect the central nervous system, such as Alzheimer's disease and pain – indications for which currently available treatment is very limited. The company is listed on Nasdaq First North Premier Growth Market and is developing several parallel drug candidates based on three research platforms: NeuroRestore®, Alzstatin® and Painless.

NeuroRestore consists of two symptomatic drug candidates where the unique mechanism of action allows for multiple indications, including Alzheimer's disease, as well as cognitive disorders associated with traumatic brain injury, sleep apnea and Parkinson's disease. The Alzstatin platform focuses on developing disease-modifying and preventive drug candidates for early treatment of Alzheimer's disease and comprises two drug candidates. Painless is the company's research platform in the field of pain and contains two projects: ACD440, which is a drug candidate in the clinical development phase for the treatment of neuropathic pain, and TrkA-NAM, which targets severe pain in conditions such as osteoarthritis. AlzeCure aims to pursue its own projects through preclinical research and development through an early clinical phase, and is continually working on business development to find suitable outlicensing solutions with other pharmaceutical companies.

FNCA Sweden AB is the company's Certified Adviser. For more information, please visit [www.alzecurepharma.se](http://www.alzecurepharma.se)

## About Alzstatin®

AlzeCure's disease-modifying research platform, Alzstatin, consisting of disease-modifying and preventive drug candidates, focuses on reducing the production of toxic amyloid beta (A $\beta$ ), such as A $\beta$ 42, in the brain. A $\beta$ 42 plays a key pathological role in Alzheimer's and begins to accumulate in the brain years before clear symptoms develop. The drug candidates in the Alzstatin platform modulate the function of the enzyme gamma secretase. Gamma secretase acts like a pair of scissors and cuts A $\beta$ 42 out from a longer protein known as APP. The sticky A $\beta$ 42 clumps together giving rise to the amyloid plaque so typical of Alzheimer's disease. The candidates in the Alzstatin platform affect enzyme function so that it instead cuts out shorter forms of the A $\beta$  peptide, A $\beta$ 37 and A $\beta$ 38, which in addition to them not being sticky and not forming aggregates, also have a restrictive effects on A $\beta$ 42 aggregates already formed. This means the drug candidates in the Alzstatin platform have two separate but synergistic effects that together contribute to a stronger anti-amyloidogenic – and thus more potent – disease-modifying effect. This specific mechanism of action differentiates it from biological therapies, e.g. antibodies. Moreover, small molecules such as Alzstatin, have several other advantages, including easy and non-invasive administration as tablets or capsules. Small molecules will also generally pass more readily through the blood-brain barrier to reach its target, the brain.

### About Alzheimer's disease

Alzheimer's disease is the most common form of dementia, affecting approximately 45 million people worldwide. Alzheimer's disease is a lethal disorder that also has a large impact on both relatives and the society. Today, preventive and disease modifying treatments are missing. The main risk factors to develop Alzheimer's are age and genetic causes. Even though the disease can start as early as between 40 and 65 years of age, it is most common after 65 years. Significant investments in Alzheimer research are being made because of the significant unmet medical need and the large cost of this disease for healthcare and society. The total global costs for dementia related diseases is estimated to about 1,000 billion USD globally in 2018. Given the lack of both effective symptomatic treatments and disease modifying treatments, the need for new effective therapies is acute. The few approved drugs on the market today have only a limited symptomatic effect and can produce dose limiting side effects. A disease modifying treatment for Alzheimer's disease is estimated to reach more than \$15 billion in annual sales. In Sweden, approximately 100,000 people suffer from Alzheimer's disease with a healthcare cost of about SEK 63 billion yearly, which is more than for cancer and cardiovascular diseases combined.

### Image Attachments

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Martin Jönsson And Gunnar Nordvall AlzeCure Pharma

### Attachments

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