UMSL Innovations
University of Missouri–St. Louis

Alzheimer's Disease Antibody

Passive Immunization Treatment for AD. A monoclonal antibody that is highly selective for a particular form of the protein that is the primary trigger for AD onset.

Category

Medical & Healthcare

Plant & Life Sciences

View online

Alzheimer's Disease (AD) is the number one cause of dementia and the sixth leading cause of death. Currently, there are 5.8 million cases in the U.S. at a cost of $290 billion. Estimates anticipate 14 million cases by 2050 with a cost of $1.1 trillion. There are 50 million AD and related dementia cases globally.

THE PROBLEM. Alzheimer's Disease (AD) is 100% fatal; there are no approved disease-modifying treatments. Current drugs treat only the symptoms of dementia.

THE SOLUTION. The accumulation of aggregated amyloid-beta protein (Aβ) - senile plaques, oligomers, and protofibrils - is at the core of AD. Researchers have characterized the monoclonal antibody, mAbSL, which is highly selective for a particular form of the protein that is the primary trigger for AD onset. The mAbSL monoclonal antibody shows promise for development of a passive immunization treatment to be given at the early stage of AD. The mAbSL therapy may stop or even reverse AD progression.

DEVELOPMENT STAGE. Researchers have obtained, cloned, sequenced, expressed, purified, and characterized the monoclonal antibody (mAbSL). Next steps include production scale-up, animal studies in AD transgenic mice, and humanization of the mAbSL antibody.

APPLICATIONS. This technology has application in the diagnosis and treatment of Alzheimer's Disease.

BENFITS. The mAbSL monoclonal antibody shows higher selectivity to the main trigger of AD over other drugs in development. A therapeutic based on this technology could be used to prevent the onset of AD and reverse the disease, treating AD itself rather than just the symptoms or just slowing progression.

IP PROTECTION. U.S. patent application serial no. 17/636,923 was filed 02/21/2022. A patent application in Canada is also pending.

BUSINESS OPPORTUNITY. The University is seeking a commercial collaborator to further develop and bring this technology to market.

ADDITIONAL OPPORTUNITY. Polyclonal antibodies are available for research purposes as well.

LEAD INVENTOR. Dr. Michael R. Nichols, Professor, Department of Chemistry & Biochemistry
https://www.umsl.edu/chemistry/Faculty/nichols.html

Please contact us if you are interested in collaborating or licensing.