Novel Small Molecules to Treat Alzheimer’s Disease

Small compounds that inhibit the uptake of amyloid-β into the brain.

Problem Solved by This Technology
There are over 5 million Americans with Alzheimer’s disease (AD). Current therapies target only symptoms and do not inhibit or reverse the cause and progression of the disease. Recent research has identified the transport mechanism of the neurotoxic amyloid-beta (Aβ) protein through the blood-brain barrier as a possible cause of increased Aβ accumulation in sporadic AD. Increased Aβ accumulation occurs in greater than 98% of Alzheimer’s patients and is correlated to the disease’s symptoms.

Applications
Researchers at the University of Rochester have identified compounds that disrupt Aβ transport thus providing the possibility for a new therapeutic approach to AD. These compounds effectively inhibit the interaction between Aβ and its main transport receptor and consequently the uptake of Aβ into the brain.

Unlike current available treatments, these compounds directly target the cause of Alzheimer’s disease rather than treating its symptoms. The target and inhibitory compounds have been validated in vivo.

Publication

Intellectual Property Status