



Christopher Winrow, Ph.D.
Cyclerion Therapeutics Inc
 Cambridge, MA

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Phase 2 study of CNS sGC stimulation in AD with vascular features

This Phase 2 clinical trial will examine whether an experimental chemical compound may improve brain blood flow and memory, as well as reduce the brain changes observed in Alzheimer's.

PI

- Ph.D., Cell Biology and Anatomy, University of Alberta, Edmonton, Canada, 1999
- Head of Translational Medicine, Clinical Development and Neuroscience Lead, Cyclerion Therapeutics, Inc.
- Director, Senior Principal Investigator & Team Leader, Merck & Co, PA, 2002-2016

Background

Blood vessels in the brain provide nerve cells with vital, oxygen-rich blood that is critical for the cell's ability to function properly. Inadequate blood flow can damage and eventually kill cells anywhere in the body, but the brain is especially vulnerable. Studies show that loss of brain blood vessel (or "cerebrovascular") function may be an early brain change in Alzheimer's. These changes may lead to the nerve cell damage and death observed in disease.

Preliminary studies conducted in animal models by Dr. Christopher Winrow and colleagues have shown that a chemical compound called IW-6463 may improve brain blood flow and memory, as well as slow brain changes observed in Alzheimer's.

Research Plan

Building on their Phase 1 study, Dr. Winrow and colleagues will conduct a Phase II clinical trial to test the safety and tolerability of once daily IW-6463 for one month in 26 participants with mild to moderate Alzheimer's dementia as well as cerebrovascular dysfunction. The researchers will collect brain scans and blood samples to evaluate the impact of their experimental drug on brain blood flow and blood vessel health in the participants. Additionally, they will examine memory and test blood samples for other biological markers of Alzheimer's such as brain inflammation and brain cell death to evaluate the impact of IW-6463 on the brain. If successful, they will prepare to test IW-6463 in larger, later phase clinical trials.

Impact

If successful, the study results may give rise to a new therapeutic strategy to improve brain blood flow and memory as well as reduce brain changes observed in Alzheimer's.

STUDY

- CADRO category: Translational Research & Clinical Interventions

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