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2020 Part the Cloud Gates Partnership (PTC-G) - $1,804,966

Anti-viral treatment in mild cognitive impairment

This Phase2 clinical trial will examine whether an antiviral drug can reduce associated brain changes and changes in memory and thinking observed in mild cognitive impairment.

PI

- M.D., SUNY Upstate Medical Center, Syracuse, NY, 1982
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STUDY

- CADRO category: Translational Research & Clinical Interventions

Background

Some researchers have suggested associations between bacteria and viruses and brain diseases including Alzheimer's. Herpesvirus is one of the viruses being studied for its potential contribution to Alzheimer's. HSV1 (Herpes Simplex Virus-1) and HSV2 (Herpes Simplex Virus-2) have been found in the brains of individuals' with Alzheimer's and may be associated with increased accumulation of beta-amyloid plaques and tau tangles. However, the biological mechanisms that may link HSV1 and HSV2 to the brain changes seen in Alzheimer's are unknown. Preliminary evidence suggests an antiviral drug that targets HSV may be a novel target for Alzheimer's therapy. Dr. Davangere Devanand and colleagues will investigate the impact of an antiviral drug on the brain changes observed in Alzheimer's.

Research Plan

Dr. Devanand's team will conduct a Phase 2 clinical trial with 50 individuals who have been confirmed for having HSV at any point in their lives and have mild cognitive impairment (a condition with subtle memory loss that may precede dementia, including Alzheimer's dementia). Participants in the study will receive the drug or a placebo (not the actual drug but an inactive substance that has no benefits and also no risk for the participant) for 1 year. The researchers will collect blood samples and administer cognitive tests as well as brain scans (Magnetic Resonance Imaging - MRI and Positron Emission Tomography - PET) to the participants. Using these measures the researchers will evaluate the impact of the drug such as reduced brain changes (for instance, decrease in the level of plaques in the brain) and a decrease in cognitive decline. They will then prepare to test it in larger clinical trials.

Impact

If successful, the study results could pave the way for a potential new avenue for treatment for individuals with MCI.

Made possible through the generous funding of The Part the Cloud, benefiting the Alzheimer's Association.