Phase IIA Trial to Evaluate Allogenic Stem Cells in Patients with Mild to Moderate Dementia due to Alzheimer’s Disease

Official Title:
A Phase IIA, Multi-Center, Randomized, Single-Blind, Placebo-Controlled, Crossover Study to Assess the Safety, Tolerability, and Preliminary Efficacy of a Single Intravenous Dose of Allogenic Human Mesenchymal Stem Cells to Subjects with Mild to Moderate Dementia due to Alzheimer’s Disease

The purpose of this study is to assess the safety and tolerability of ischemia-tolerant allogeneic human mesenchymal stem cells (hMSCs) versus placebo administered intravenously.

Alzheimer’s disease is the most common cause of dementia among older adults. It is currently ranked as the sixth leading cause of death in the United States. Preclinical experiments conducted by Stemedica using intravenous (IV) delivery of hMSCs demonstrated efficient Abeta amyloid plaque removal in the brain parenchyma of the APPPS1 mouse model. The beneficial effect on Abeta plaques was accompanied by an overall decrease in neuroinflammation markers without the appearance of amyloid clearance side effects.

Two cohorts, Cohort 1 (IV dose of hMSCs at 1.5 million cells/kg body weight on Study Day 1) and Cohort 2 (equal volume of Lactated Ringer’s Solution on Study Day 1) will crossover at six-month time point so both Cohorts will receive Lactated Ringer’s Solution and hMSCs. No subject will receive more than the maximum dosage of 150 million cells in this study.

Key Inclusion Criteria:
- Age 55-80 years
- Diagnosed with mild to moderate dementia for at least 3 months
- MMSE between 12-24 (inclusive) at time of enrollment
- Amyloid-positive florbetapir PET scan

Key Exclusion Criteria:
- Prior treatment with stem cells
- History of intracranial, subdural, or subarachnoid hemorrhage
- Subjects with baseline brain MRI showing more than four (4) cerebral microhemorrhages
- History of seizure disorder
- History of cerebral neoplasm