# Human iPSC-derived GABAergic Progenitors for Alzheimer's Disease Treatment

## Grant Award Details

Human iPSC-derived GABAergic Progenitors for Alzheimer's Disease Treatment

**Grant Type:** Therapeutic Translational Research Projects

**Grant Number:** TRAN1-09394

**Project Objective:** Conduct a pre-IND meeting with the FDA.

**Investigator:**

| | |
|---|---|
| **Name:** | Yadong Huang |
| **Institution:** | Gladstone Institutes, J. David |
| **Type:** | PI |

**Disease Focus:** Alzheimer's Disease, Neurological Disorders

**Human Stem Cell Use:** iPS Cell

**Cell Line Generation:** iPS Cell

**Award Value:** $1,900,000

**Status:** Closed

## Grant Application Details

**Application Title:** Human iPSC-derived GABAergic Progenitors for Alzheimer's Disease Treatment

**Public Abstract:**

**Translational Candidate**

Human iPSC-derived GABAergic interneuron progenitors.

**Area of Impact**

Alzheimer's disease and related conditions.

**Mechanism of Action**

Transplantation of human iPSC-derived GABAergic progenitors, which will develop into mature GABAergic interneurons, to replace the lost GABAergic interneurons in the hippocampus of AD brains and related disorders.

**Unmet Medical Need**

As a complex disease that damages the hippocampus, a brain region essential for cognition, Alzheimer's disease presents unique challenges for developing traditional therapies. iPSCs provide a way to generate brain cells for cell-replacement therapy.

**Project Objective**

Pre-IND

**Major Proposed Activities**

- Establish a robust differentiation protocol for deriving GABAergic progenitors from human iPSCs.
- Short-term efficacy and safety tests of human iPSC-derived GABAergic interneuron progenitors.
- Long-term efficacy and safety tests of human iPSC-derived GABAergic interneuron progenitors.

**Statement of Benefit to California:**

Alzheimer's disease (AD) is the leading cause of dementia in California. Currently, there are over 480,000 AD patients in California—more than in any other US state—costing over $20 billion USD in healthcare each year. This research project focuses on developing cell-replacement therapies for AD. Successful completion of this research could help to improve the health of Californians and reduce the adverse impact of AD, thereby increasing productivity and enhancing quality of life.

---

**Source URL:** https://www.cirm.ca.gov/our-progress/awards/human-ipsc-derived-gabaergic-progenitors-alzheimer%E2%80%99s-disease-treatment