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## Optimization of a human interneuron cell therapy for traumatic brain injury

### Grant Award Details

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Optimization of a human interneuron cell therapy for traumatic brain injury

**Grant Type:** Quest - Discovery Stage Research Projects

**Grant Number:** DISC2-12164

**Project Objective:** To establish feasibility of human a iPSC-derived medial ganglionic eminence progenitor cell candidate for the treatment of traumatic brain injury that is ready for translational stage activities.

**Investigator:**

<b>Name:</b>	Robert Hunt
<b>Institution:</b>	University of California, Irvine
<b>Type:</b>	PI

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**Disease Focus:** Neurological Disorders, Traumatic Brain Injury

**Human Stem Cell Use:** iPS Cell

**Award Value:** \$250,000

**Status:** Active

### Grant Application Details

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**Application Title:** Optimization of a human interneuron cell therapy for traumatic brain injury

**Public Abstract:** **Research Objective**

A cell therapy product comprised of inhibitory neurons that can migrate, integrate and restore neurologic function after traumatic brain injury.

**Impact**

Traumatic brain injury

**Major Proposed Activities**

- Examine the most effective dose and safety profile of human iPSC-derived MGE cells grafted into rodent hippocampus.
- Determine whether human iPSC-derived MGE cells mature into appropriate cortical interneurons in the traumatically injured brain
- Evaluate the effect of human GABA neurons on synaptic activity in the injured brain
- Evaluate the therapeutic potential of human-derived interneurons

**Statement of Benefit to California:** Nearly 6 million Americans - including 700,000 Californians - live with permanent physical or mental health problems resulting from a traumatic brain injury, but there are no treatments. We propose studies to create a cell therapy product that is capable of restoring neurologic function to these patients.

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