
An iPSC cell based model of macular degeneration for drug discovery.

Grant Award Details

An iPSC cell based model of macular degeneration for drug discovery.

Grant Type: Inception - Discovery Stage Research Projects

Grant Number: DISC1-10721

Project Objective: Creation of a human stem cell based model for Age related macular degeneration (AMD) to be used for drug screening.

Investigator:

Name:	Karl Wahlin
Institution:	University of California, San Diego
Type:	PI

Disease Focus: Age-related macular degeneration, Vision Loss

Human Stem Cell Use: iPS Cell

Cell Line Generation: iPS Cell

Award Value: \$232,200

Status: Active

Grant Application Details

Application Title: An iPSC cell based model of macular degeneration for drug discovery.

Public Abstract:**Research Objective**

Towards a cure for age related blindness, we propose to create a human stem cell based model to screen for drugs that are protective against Age related macular degeneration (AMD).

Impact

With up to 11 million people in the United States affected by AMD, effective treatments against macular degeneration could address vision loss in millions of people.

Major Proposed Activities

- Using stem cells engineered with disease relevant mutations, we will generate reporter stem cells that will allow us to visualize in the lab a major feature of age related macular degeneration.
- We will study these cells to identify new biomarkers of the disease.
- We will screen a library of drugs that are already approved FDA approved for other applications in an effort to find drugs that could be quickly repurposed for AMD.

Statement of Benefit to California:

The number of people with age-related macular degeneration in the US is roughly 11 million. And with 12% of the US population, that means that ~ 1.3 million individuals in California have some form of macular degenerative disease. Aside from the associated health care costs and loss of work, macular degeneration poses a serious quality of life for Californians. Developing new therapeutics for AMD here in California could provide new jobs to the local economy and bolster the biotech industry.

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