Embryonic Stem Cells for Corneal Endothelial Degeneration

Grant Award Details

Grant Type: Inception - Discovery Stage Research Projects
Grant Number: DISC1-08848
Project Objective: To test the hypothesis that embryonic stem cell-derived HCECs can repair the cornea in a rabbit model of corneal endothelial cell dysfunction.

Investigator:

<table>
<thead>
<tr>
<th>Name</th>
<th>Jeffrey Goldberg</th>
</tr>
</thead>
<tbody>
<tr>
<td>Institution</td>
<td>Stanford University</td>
</tr>
<tr>
<td>Type</td>
<td>PI</td>
</tr>
</tbody>
</table>

Disease Focus: Vision Loss
Human Stem Cell Use: Embryonic Stem Cell, iPS Cell
Award Value: $235,836
Status: Closed

Progress Reports

Reporting Period: Year 1
View Report

Grant Application Details

Application Title: Embryonic Stem Cells for Corneal Endothelial Degeneration
Public Abstract: Research Objective

The proposed studies will determine the optimal approaches to differentiate and transplant stem cell-derived corneal endothelial cells.

Impact

These data will provide foundational proof-of-concept data that will allow the rapid advance of a cell therapy towards clinical application.

Major Proposed Activities

- Determine optimal conditions to generate human corneal endothelial cells from human stem cells, assaying both cellular and functional markers.
- Test efficacy in a rabbit model that closely mimics human injury or degeneration, examining disease-relevant functional assays.

Statement of Benefit to California:

1. Employing California’s citizens in the research funded through CIRM and thereafter as this project advances.
2. Developing a first-in-class treatment for California’s citizens with corneal diseases affecting their vision.

Source URL: https://www.cirm.ca.gov/our-progress/awards/embryonic-stem-cells-corneal-endothelial-degeneration