Autologous cell therapy for Parkinson’s disease using iPSC-derived DA neurons

Grant Award Details

Autologous cell therapy for Parkinson’s disease using iPSC-derived DA neurons

Grant Type: Quest - Discovery Stage Research Projects

Grant Number: DISC2-09073

Project Objective: To further characterize the functionality and variability of iPSC-derived dopaminergic neurons derived from Parkinson’s patients for the development of an autologous, cell-based therapy.

Investigator:

<table>
<thead>
<tr>
<th>Name</th>
<th>Jeanne Loring</th>
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</thead>
<tbody>
<tr>
<td>Institution</td>
<td>Scripps Research Institute</td>
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<tr>
<td>Type</td>
<td>PI</td>
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Disease Focus: Neurological Disorders, Parkinson’s Disease

Human Stem Cell Use: iPS Cell

Cell Line Generation: iPS Cell

Award Value: $2,299,786

Status: Closed

Progress Reports

Reporting Period: Year 1 NCE

View Report

Grant Application Details

Application Title: Autologous cell therapy for Parkinson’s disease using iPSC-derived DA neurons
Public Abstract:

Research Objective

Autologous human dopaminergic neurons derived from patient-specific induced pluripotent stem cells

Impact

Parkinson's disease

Major Proposed Activities

- Characterize differentiation from all 10 patient cell lines
- Characterize functionality of patient neurons matured in vitro
- Immunogenicity assessment
- Cryopreservation feasibility testing
- Investigate dose response in vivo
- Detect dopamine release in vivo

Statement of Benefit to California:

Thousands of Californians suffer from the degenerative effects of Parkinson's disease, a disease for which there is no cure. There is hope, however, that stem cells could provide the key to providing long-term relief. Our study seeks to treat patients with cells derived from their own stem cells, a process which could be applied to other diseases such as diabetes and heart disease and could potentially be used to the benefit of many of the citizens of California.

Source URL: https://www.cirm.ca.gov/our-progress/awards/autologous-cell-therapy-parkinson%E2%80%99s-disease-using-ipsc-derived-da-neurons