New Methods for the Chemical Expansion of Hematopoietic Stem and Progenitor Cells

Grant Award Details

New Methods for the Chemical Expansion of Hematopoietic Stem and Progenitor Cells

Grant Type: Inception - Discovery Stage Research Projects
Grant Number: DISC1-08737
Project Objective: To study the mechanism by which eupalinilide E expands hematopoietic stem cells, and to discover new methods for the chemical expansion of hematopoietic stem and progenitor cells.

Investigator:

<table>
<thead>
<tr>
<th>Name</th>
<th>Dionicio Siegel</th>
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<tbody>
<tr>
<td>Institution</td>
<td>University of California, San Diego</td>
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<td>Type</td>
<td>PI</td>
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Disease Focus: Blood Disorders
Human Stem Cell Use: Adult Stem Cell
Award Value: $232,200
Status: Closed

Progress Reports

Reporting Period: Year 2
View Report

Grant Application Details

Application Title: New Methods for the Chemical Expansion of Hematopoietic Stem and Progenitor Cells
### Public Abstract:

**Research Objective**

We will develop a new agent that can increase the production of hematopoietic stem and progenitor cells and determine how the compound functions.

**Impact**

We aim to develop a method to achieve the highest fold expansion of hematopoietic stem cells from a single unit of cord blood achieved to date increasing the supply of these clinically relevant cells.

**Major Proposed Activities**

- We will identify the biological target(s) of our novel compound that promotes expansion and inhibit differentiation.
- We will develop conditions using existing agents for expansion in combination with our new compound to maximize the expansion of hematopoietic stem and progenitor cells from cord blood.

**Statement of Benefit to California:**

We aim to develop a cost effective, cryopreserved source of hematopoietic stem cells by providing an expansive source of produced through the expansion of cord blood using well defined agents. This would provide a widely available, economically adjusted product for widespread use in California and beyond.

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