
Identifying HLA Class I Restricted Peptides That Induce CD8+ T Cells Against SARS-CoV-2

Grant Award Details

Identifying HLA Class I Restricted Peptides That Induce CD8+ T Cells Against SARS-CoV-2

Grant Type: Discovery Research Projects

Grant Number: DISC2COVID19-11941

Project Objective: To identify a catalog of peptides from Spike protein that bind to human HLA Class I molecules and stimulate CD8+ T cell responses, as the basis for novel cell-based vaccine development

Investigator:

| | |
|---------------------|---------------------|
| Name: | Albert Wong |
| Institution: | Stanford University |
| Type: | PI |

Disease Focus: COVID-19, Infectious Disease

Human Stem Cell Use: Adult Stem Cell

Award Value: \$249,999

Status: Active

Grant Application Details

Application Title: Identifying HLA Class I Restricted Peptides That Induce CD8+ T Cells Against SARS-CoV-2

Public Abstract:**Research Objective**

A vaccine to help prevent COVID-19

Impact

There is a clear need for a vaccine to prevent the spread of the COVID-19 coronavirus that is effective, can be rapidly produced and can be scaled for worldwide demand.

Major Proposed Activities

- Identify structural regions of SARS-Cov-2 that can inhibit viral entry
- Identify potential regions that can induce CD8+ T cell responses
- Confirm which regions produce peptides that bind to human HLA Class I molecules
- Confirm which peptides induce antibodies inhibit viral entry using hematopoietic and bronchioalveolar stem cells
- Identify which peptides induce CD8+ T cells that lyse cells containing Spike protein from SARS-CoV-2

Statement of Benefit to California:

This research will result in a vaccine candidate that can be made part of an overall vaccine composition that will protect California citizens from contracting COVID-19, allowing its people to interact freely and resume normal activities.

Source URL: <https://www.cirm.ca.gov/our-progress/awards/identifying-hla-class-i-restricted-peptides-induce-cd8-t-cells-against-sars-cov>