



# MARCH OF DIMES HIGH SCHOOL SCIENCE WEEK



## PANELIST PROFILE

**Name:** Melissa Hernandez Kelley

**College:** Undergraduate college: UC Irvine  
Graduate School: Oregon Health and Science University

**Lab/Department:** [Laboratory of Genetics under the direction of Rusty Gage](#)

**What do you do and why it is important?** I study neuronal function and signaling through ion channels—how neurons communicate with each other. More specifically, I am studying aging in neurons that are generated from human skin cell samples through direct cellular reprogramming. Aging is a precursor to many diseases and illnesses, yet it is notoriously difficult to study since models require time to age and the tissue viability may be compromised due to aging. By using a cellular reprogramming model, I am able to study the genes involved in aging in human neurons that are grown in a dish in a relatively short amount of time.

**How did you learn about this career?** I received a fellowship as an undergraduate student at UC Irvine that allowed me to work in a lab. I had planned to apply to medical school because I wanted to help people and make an impact with my work. When I discovered the world of science and how important research was for finding treatments and curing diseases, I decided to make it my focus.

**Why are you passionate about your work and how long have you been doing it?** I have been doing research for over 13 years and every day I learn something new. I enjoy trying to understand why and how things work the way they do and it is really amazing to observe biological responses in experiments.