

CHEMISTRY & BIOCHEMISTRY COLLOQUIUM: Sequencing Based Approaches to Engineer and Study Ion Channel Trafficking, Function, and Regulation

Willow Coyote-Maestas

HHMI Hanna Gray and QBI Fellow University of California, San Fracisco

<u>Date:</u> 8/27/2021

<u>Time:</u> 10:30 AM-11:50 AM

<u>Link:</u>

https://ucmerced.zoo m.us/j/88594782904? pwd=Mk1qSHBLdlFnc VRSOE5PNjJabXl0Zz09

Abstract:

As with many other proteins, ion channels are tremendously complex. In normal physiology for an ion channel to function it must fold, traffick to the surface, respond to stimuli, and conduct ions. In disease, mutations breaks an ion channel by altering one of these stages. However, traditionally, we only study several mutations at a time which limits our ability to mechanistically understand the molecular basis of disease or how a protein normally functions in biology. As an HHMI Hanna Gray and QBI Fellow, Willow Coyote-Maestas is massively parallel sequencing-based assays to unravel the impacts of mutations in proteins. The long term goal of this work is to develop holistic multi-scale models of how proteins work in normal physiology and break in disease.